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ABSTRACT

This study was a replication of an earlier study by Mazyck (1971) which was designed to analyze characteristics of paraprofessional child care workers, as determined by ratings given on a scale of paraprofessional worker characteristics. The original study is reviewed and the development of the Mazyck Rating Scale for Paraprofessionals, is discussed. The Scale was composed of two categories of characteristics: Personal-Social, and Educational-Biographical-Working Relationships. In the present study, the category Reaction to Stress was added, and the original experiment was replicated with a different and smaller group of child workers and specialists similar to those used in the first study. Findings show that from both studies there are 20 scale items that each of the groups agree on as being significant characteristics of paraprofessionals. The next step is to devise ways of measuring the identified characteristics and to develop instruments useful for persons interested in selection of child care workers. Extensive statistical data are included, as well as a copy of the Rating Scale as used in the second study. (ED)

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A STUDY OF CHARACTERISTICS OF PARAPROFESSIONALS IN CHILD CARE SERVICES IN THE FAR WESTERN UNITED STATES

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North Carolina Agricultural and Technical State University

A STUDY OF CHARACTERISTICS OF PARAPROFESSIONALS IN CHILD CARE SERVICES IN THE FAR WESTERN UNITED STATES

by

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PREFACE

The characteristics of paraprofessionals who work in child care have been of considerable interest to this researcher for several years. The early interest culminated in dissertation research for which the Mazyck Rating Scale for Paraprofessionals was developed and used to gather data on a select group of paraprofessionals. The present study has been a second phase of the original thesis regarding child care worker characteristics, i.e. that there are specific characteristics which may apply to child care paraprofessional workers, and that these characteristics can be discriminated within a group of characterizing statements.

Appreciation is expressed to the Manpower Research and Training Center at North Carolina Agricultural and Technical State University in Greensboro, for its financial support to this project. Without the Center's assistance, the project could not have reached completion.

The assistance of four people has been most significant in the many details that had to be considered in a field study of this kind. A great deal of appreciation for many hours of work should go to Cleopatra Howard, Dara Murphy, Patricia Toney, and Jacqueline Whitted, who were students at North Carolina A and T State University, for the time spent working with the data involved in this study.

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February 1974

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INTRODUCTION

"What is a child care paraprofessional?" This is a question frequently asked by many authorities and laymen in the field of child care. It seems there are many definitions dependent upon some particular philosophy which an individual may possess. The literature related to child care shows a vast array of factors which people think are important. In an earlier research study (Mazyck, 1971), there was assembled a list of characteristics in a rating scale which was anticipated would be able to differentiate characteristics descriptive of a desirable paraprofessional child care worker. A desirable paraprofessional child care worker was one who was more like a professional than like an untrained child care worker.

The success that was observed from the first attempt to use the Mazyck Rating Scale for Paraprofessionals (MRSP) by Mazyck (1971) implied that with further use and similar results, there could be established with some degree of assurance a list of worker characteristics that would be considered reliable. It was with this thesis that the current research was undertaken.

The hypothesis was that upon replication of the 1971 research by Mazyck, similar findings would result. These findings would show that a group of subjects primarily from the Western United States agreed with a group of subjects from the Eastern United States on statements they considered as desirable characteristics for paraprofessional child care workers.

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CHAPTER I

A REVIEW OF THE ORIGINAL STUDY

Related Literature

The review of literature for the original research study was divided into seven major areas, a general review of characteristics of nonprofessionals, of human service aides, of child care aides, of teacher aides and assistants, of social work aides, of home health aides, and of neighborhood workers, and related aides. It covered the period from 1960 through September, 1970.

A variety of terms was used synonymously with the term paraprofessional. Many writers described the subprofessional as one who performs tasks "for which full professional training is not necessary (Lynton 1967, p.2)." Most of these jobs fall in the category of entry level and only require the kind of training that is below professional level and in which one can become adequately skilled to perform the work with a short training period. Part of the problem of gathering data on the subprofessional, paraprofessional, or whatever other term is used to designate this person, was confounded by the confusion of terminology and conception (Lynton, 1967). In spite of this confusion, considerable agreement exists that paraprofessionals are needed in the area of human services. Ross gave three major reasons for using nonprofessionals in human services:

(1) the acute shortage of professionals;
(2) providing employment opportunities for those having the greatest job problems, namely, the poor;
(3) improved communication between the professional and his "client", (1969, p. 10).

Lynton stated that leaders in the fields of health, education and welfare no longer see the subprofessional as an expedient to temporarily fill a vacancy, but rather as an "untapped manpower resource with long-range potential" (1967, p. 67). The nonprofessional frequently becomes quite competitive with professionals and their often recognized ability to communicate with the low-income community in an effective manner

may surpass the professional in effectiveness. Riessman (1967) reported that many nonprofessionals with training can find themselves challenging the professional as they both attempt to reach their clientele. He further stated that the nonprofessional has the characteristics of humor, earthiness, neighborliness, and all the characteristics which give him positive appeal to low-income populations.

Cohen (1965, p.20) wrote that the Women's Talent Corps considered

> . . . nonprofessionals as teachers' assistants, assistants in nursing, pre-nursery programs, elementary language skills, as guidance assistants in school, casefinders, neighborhood workers, remedial instruction aides, housing and legal service assistants, as public relations personnel with employment agencies and businesses, in housing projects, and with local newspapers or mass media operations, as counselors and guides to recreation and sports programs.

It should be realized that many of the foregoing kinds of jobs would only be found in metropolitan areas. Cohen (1965) further stated that selecting prospective nonprofessionals for employment will require careful advance planning, since being adult does not necessarily signify maturity, responsibility, dependability, and other significant characteristics.

Human Service Aides

In discussing the area of human service aides, Cohen (1967) advocated the establishment of a College of Human Services as a part of the work of the Women's Talent Corps. This college was viewed as the agency for preparing a wide variety of aides that would deliver services of different kinds to the public. This training site would provide a type of education for the mature working people of the society and allow such new careerists to perform functions that an overburdened staff cannot perform in schools, hospitals, neighborhood houses, welfare centers, and community development agencies.

In reference to the human service aide, Shatz, Fishman, and Klein (1969) found confidentiality a desirable characteristic, while Denham (1968, p.32) added that the aide should have

> . . . no current criminal action pending . . . , no gross physical defects, and if a school dropout, he must have been out of school for at least one year.

It was further suggested that aides range in age from 16-21 years. Denham (1969, p.84) made this comment about the human service aide:

> The time is still far off when the social, political and economic climate of the country will be such as to make commonplace the utilization of a relatively uneducated, disadvantaged, and perhaps delinquent young person as a worker in human services.

Denham believed, however, that criteria could and should be placed at a minimal level so as not to screen out people who could be successful in the program.

Child Care Aides

Birnbaum, in the discussion of child care aides in the Project Education and Neighborhood Action for Better Living Environment (ENABLE), stated that their selection should take into account

> . . . role expectations inherent in the helping function; the personal qualities or strengths which will enhance effective role performance; the background factors which account for the aide's special assets (1967, pp. 37-38).

Birnbaum stated aides should have compassion, ability to identify with the poor, ability to encourage self-help in others, appreciation of oppressed people, and the impetus to help the poor to learn how to exercise control over social forces which affect them. In addition, adequate verbal communication skills and the aide's having roots in the target community were essential (Birnbaum, 1967).

Rahmlow and Kiehn (1967) viewed the analysis of tasks performed in child care as giving rise to a list of basic knowledge requisite to their performance. The authors saw child care workers as relaxed, patient, secure within themselves, having a sense of humor, warm, outgoing and firm, yet not dominating, and as people who enjoy children and accept them. Confidence and ability to see limitations are essential. Rahmlow and Kiehn (1967) reported that from their study only two percent of child care workers were male and ninety-eight percent female. Fifty-two percent were over 30 years of age.

Teacher Aides

Literature about the teacher aide, classroom aide, auxiliary school personnel, or education auxiliary as found in a wide variety of settings, Head Start programs, the regular elementary classrooms, specialized educational programs, and other related educational programs, was abundant.

Bowman and Klopf stated that

> . . . in 1953, the first major experiment in utilization of auxiliary personnel in American education was undertaken in Bay City, Michigan, with funds from the Ford Foundation. This program was designed to increase teacher effectiveness by freeing teachers from disproportionate nonprofessional functions. Two similar studies followed shortly, also financed by the Ford Foundation: the Yale-Fairfield Study (Connecticut) and the Rutgers Plan (New Jersey). These experiments were aimed at assisting administrators in preserving quality education in the face of severe shortage of professional personnel, the rising costs of education, and the problems of oversized classes. The teaching profession appeared to react negatively, on the whole, to an employment device which would assign available educational funds to the employment of untrained personnel, rather than to the employment of more teachers. Some observers believe that the resistance created among teachers by the emphasis on budgetary considerations in the Bay City experiment retarded progress in the development of auxiliary personnel in school systems for at least a decade. (Bowman and Klopf, 1968, p. 7).

From about 1965, the employment of auxiliary personnel in schools has risen sharply due to available Federal funds on a massive scale for programs designed to battle the war on poverty. The funds were available through the Office of Economic Opportunity, the Office of Education, and the Department of Labor (Bowman and Klopf, 1968).

Fitzpatrick (1965) in a study emanating out of the New Mexico State Department of Education at Santa Fe, listed the following minimum qualifications for the classroom aide

> . . . high school graduate, at least 21 years old, ability to operate A-V machines, ability to operate duplicating machines, ability to type, good handwriting, good oral reading ability, ability to work

with children and adults, mathematical ability, sense of professional ethics, emotional maturity, command of the English language, and attendance at a classroom aide workshop.

Specific characteristics were cited in the Berkeley Project, one of 15 projects using teacher aides surveyed by Bowman and Klopf (1968). The criteria used in the selection of aides for this project were: to be literate, but no specific educational standards required; to have a child in the specific school in which the person is going to be an aide; to have a low level of income; to be emotionally stable and have a moderately wholesome attitude toward others; to abide by the rules of the school; and to meet state and local health requirements. Many other reports and studies of the aide in the educational setting had a list of characteristics that had been devised for its own needs. In New York City where teacher aides (kindergarten paraprofessionals) were being used in 1968 in the City public schools, large numbers were registered for some form of college credit. Ward (1968) reported that the "typical" paraprofessional had the following characteristics: A mother, age 35, who works in the public schools 30 hours a week; who has been out of school for well over 15 years, but attends classes three or four evenings a week; and who manages a household of five family members on a family income of about $6500 a year before deductions.

A most extensive list of qualifications for aides in education was developed for use in 17 school districts participating in the Gulf School Research Development Association. The qualifications were:

1. an earned minimum of a high school diploma.
2. a sense of orderliness and an ability to work within a routine and yet be flexible and undisturbed by change.
3. ability to work under supervision of the classroom teacher.
4. self-confidence and a sense of humor.
5. common sense and good judgment in order to cope with myriad emergencies which arise and the foresight to anticipate possible emergencies.
6. ability to assume responsibility.
7. ability to make mature judgements and reflect mature reactions.
8. an abundance of physical energy and good health.

9. ability to remain calm and not become easily distressed or upset.

10. self-reliance and the ability to feel secure in working with professional personnel.

11. a pleasing voice that is gentle, but projects authority.

12. good moral character.

13. ability and desire to understand children, love children, and work with children.

14. neat appearance.

15. a good command of the English language, free of major dialectical handicaps and problems that can be transmitted to children.

16. ability to prepare and maintain clerical records and reports.

17. ability to spell correctly and work simple arithmetic computations.

18. ability to understand and follow oral and written directions.

19. ability to do research for teachers.

20. ability to relieve the teacher of such tasks as may be routinely assigned by the teacher.

21. ability to deal with pupils, parents, and the public in a courteous and tactful manner.

22. ability to work harmoniously with fellow employees.

23. ability to have insights into the personality problems of others.

24. a willingness to work.

25. considerate and thoughtful.

26. alert and seeking for ways to serve teachers and children.

27. cooperative.

28. receptive and responsive to learning things.

29. a resident and a member of the community with knowledge of and access to community.

30. initiative.

31. ability to communicate.

32. good family background.

33. patience.

(DeHart, 1968, pp. 17-19).

The Gulf Coast administrators indicated that preference was given to aides who had special interests in and experience with children, showed a pleasing personality, exhibited a degree of maturity, had contact with the public previously, showed an awareness of human behavior, and was a resident in the community in which the school was located (DeHart, 1968).

Bowman and Klopf (1969) concurred with most of the qualifications named above by the Gulf Coast School Research Development Association; however, these qualifications were described as competencies desired in the paraprofessional as a member of the educational team.

Springfield Public Schools (1969, p.1) in a proposal for teacher aides in an Elementary and Secondary School Education Act (ESEA) Title I project, listed the following qualifications:

1. to demonstrate a sincere interest in children.

2. to possess a pleasing manner and voice.

3. to possess good diction.

4. to show a neat appearance.

5. to be dependable and prompt.

6. to demonstrate a willingness to cooperate with others.

7. to possess good health.

8. to have a high school diploma is desirable, not necessary.

Brunson (1969) in a report on the teacher and his staff in North Dakota, supported the following characteristics for teacher aides: cooperation, dependability, quality of work, ability to work with teachers, personal characteristics, clerical skill, enthusiasm, general appearance, adaptability, emotional stability, initiative, resourcefulness, punctuality and attendance, judgment, ability to communicate, speech, and attitude toward job.

Greenberg (1967) in a review of literature from 1942 to 1967 on the use of the nonprofessionals as teacher aides, broadly concluded that the concept of the teacher aide was sound and promised to become a potent method for breaking the poverty cycle for those directly involved in the nonprofessional programs. The programs offer more than just jobs; like education they contain powerful intangible benefits.

Andres' (1967) study of characteristics of paraprofessionals in Arizona, California, Colorado, Nevada, New Mexico, and Utah found no difference in criteria from those previously stated by other writers. Weisz (1967) stated that it is important to consider flexibility, sensitivity to children's needs, self-esteem, acceptance of authority, and ability to cope with a variety of situations, as important factors in screening and selecting aides to work with young children. Holsay (1965, p. 138) added to the Weisz list, "enjoy being with children."

In conclusion, studies have been able to identify the characteristics of the teacher aide. Not all writers have agreed on specific characteristics of importance; however, many stated that personal qualities were more important than formal education and thus gave most attention to different personal qualities.

Social Work Aides

Kestenbaum (1967) reported that for developing aides for service in public and private social institutions, the following characteristics were used: motivation to participate, open to new ideas, good performance on jobs, possible candidates for permanent positions or advancement, over 18 years of age, and can read the newspaper. Coston (1965) reported a project in social work wherein the majority of the 20 social work paraprofessionals had more than two years of college or above.

Home Health Aides

The Handbook for Home Health Aide Training (1967) contained do's and don'ts of conduct which may be representative of some character-

istics, for example: respect for authority; honest; cheerful; dignified; loyal; courteous; thoughtful; punctual; pleasing voice; careful; respect for others; regard for patient's privacy, welfare, and his personal business.

Klein, Denham and Fishman (1968) and the editors of The Information Clearinghouse on New Careers (1968) concurred with Hiland (1968) who reported that Hoffman found in a Pittsburgh Family and Children's Service Project that the preprofessionals (aides) showed good judgment, followed directions, rendered practical services well, and provided good models for identification. Education was not a requirement; aides had to be personally secure, outgoing, able to bear hostility and anxiety, have previous experience in child care, housing work, hospital or church work, and come from the local community and neighborhood.

Table 1
Frequency Distribution of Characteristics
Used for the Selection of Paraprofessional
Workers as Found in Selected References

Frequency	Characteristic
42	reading, writing and articulateness
28	type of education (none specified - college education)
19	good physical and mental health
16	maintenance of professional ethics
16	ability to establish good working relationships
14	age specifications (range 16-25)
14	knowledge of or acquire knowledge of specific information and techniques for children

(Table continued on next page)

In conclusion, the characteristics for paraprofessionals of different kinds were numerous and varied. Among some writers there was much agreement, while among others no specific agreement. The general consensus was that there were characteristics which were identifiable. Agreement appeared to give more weight to personal characteristics than educational, with the nature of the program or project in which the paraprofessional worked serving as an important controlling factor.

Table 1 is a frequency count of the characteristics discovered in the literature that describes a paraprofessional, aide, assistant, or nonprofessional. The number of times each characteristic appeared is given, as well as the total for the characteristics.

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Table 1 (continued)

Frequency	Characteristic
13	ability to be cooperative and to work with others
13	previous experience (unemployed - related experience)
11	response to frustration, hostility, stress
11	knowledge of or can communicate with disadvantaged
10	resident of community suggested
10	arrest conviction record and narcotic addiction (none - each case handled on own merit)
9	ability to work under supervision and respect for authority
8	love and sincere interest in children
8	specified aptitudes (from none to specific)
7	good judgment and common sense
7	self-confidence and self-awareness
7	empathetic and compassionate
7	personal appearance and grooming
6	responsive, alert and adaptable
6	dependability, punctuality, responsibility and reliability
6	ability to do arithmetic and count
5	bilingual or multilingual
5	have a poverty background
5	enthusiasm and alertness
5	motivation
4	personal characteristics with specification
4	sense of humor
4	relaxed, easy-going, informal
4	references to sex (specified to non-specified)
4	pleasing voice
3	feelings of security
3	warm and responsive
3	outgoing personality
3	flexible
3	trainability
3	maturity and emotional stability
3	positive attitude toward job
3	aides required to have children

Table continued on next page

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Table 1 (continued)

Frequency	Characteristic
2	avocational interest and work in leadership of outside groups
2	commitment for advancement, training and employment
2	relieve professional teachers of routine
2	good and legible handwriting
2	ability to research and prepare reports
2	patience
2	references to sex (specific - female)
2	homemaking skill necessary
2	good moral character
2	maturity
2	interest in people
2	initiative
1	realistically aware of limitations
1	resourcefulness
1	majority of aides own home
1	capacity to share problems and concerns
1	neighborliness
1	minority or ethnic status
1	action-oriented students
1	have a telephone
1	uneven job history
1	ability to work within a structured setting
1	have an automobile
1	earthiness
1	well organized
1	approachable
1	U. S. citizen
1	friendly
1	good family background
1	quality and source of replies
1	complete application form
1	considerate and thoughtful
1	cheerful
1	move quietly
1	available 5 hours per day and 5 days per week of school year

Table continued on next page

00022

Procedure for the Original Study

The original study was an exploratory field study designed to investigate responses of four groups of subjects in regard to their opinion of the characteristics that make a desirable child care paraprofessional worker, using a Likert-type rating scale. In this study "desirable" referred to being more like a professional child care worker than an untrained paraprofessional worker. The procedure involved in this research

Table 1 (continued)

Frequency	Characteristic
1	be thoughtful
1	leadership potential
1	honest
1	pleasant personality
1	few biases
1	positive personal references
1	encourage self-help
1	cannot be punitive
1	cannot be suspicious
1	cannot be overly friendly
1	possess role identity
1	have broadening experience from travel, college, etc.
1	attendance at a classroom aide workshop
1	a sense of orderliness
1	open to new ideas
1	perform well on their jobs
1	ability to have insight into personality problems
1	mobile

N = 418

included the selection of the subjects, the development of the instrument used to gather data, the categorizing of the items in the instrument, the technique used to present the instrument to the subjects, and the method of analysis used in this investigation.

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Subjects

The subjects used in this research were divided into four major groups and each group was obtained differently. The subjects were:

Group I = 67 child development specialists of national reputation

Group II = 197 Head Start Center directors from the Mid-Atlantic Region [1]

Group III = 197 Head Start aides from the Mid-Atlantic Region who have been trained in Greensboro

Group IV = 197 Head Start aides who have not been formally trained

658 total subjects

One group was composed of child development specialists known throughout the United States for their contributions to the literature in child development and for outstanding contributions to the field of research in child development. A total of 67 authorities comprised Group I, selected from persons appearing at the November 1970 meeting of the National Association for the Education of Young Children in Boston, Massachusetts; from the list of persons who appeared before the Select Subcommittee on Education of the Committee on Education and Labor of the House of Representatives of the 91st Congress, as it conducted hearings on H. R. 13520, The Comprehensive Pre-School Educational Child Day-Care Act of 1969; and from the contributors to leading textbooks and books of readings in the area of child development.

The second group of subjects were current directors of Head Start Centers in the Mid-Atlantic Head Start Region who have had training at the Head Start Leadership Development Program, located on the campus of the University of North Carolina at Greensboro. The Mid-Atlantic Region has 197 Head Start Centers; therefore, the total number of subjects in this group was 197.

The third group of subjects was 197 Head Start aides who worked in the Mid-Atlantic Region at the Head Start Centers under the direction of the aforementioned directors. These Head Start aides also had training at the Mid-Atlantic Head Start Leadership Development Program,

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[1] Kentucky and North Carolina from the Southeast Region of Head Start included in this study will be considered in all references made about the Mid-Atlantic Region.

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located on the campus of the University of North Carolina at Greensboro. These aides were selected by their directors, who made up Group II.

The fourth group of 197 subjects was selected by the aforementioned directors of the Mid-Atlantic Head Start Region, using the following criteria: these 197 aides worked in Head Start Centers in the Mid-Atlantic Region under the direction of the directors in Group II, but this group of aides had no formal training except the usual in-service Head Start training found in each local program.

Contact was made with the Director of the Mid-Atlantic Head Start Leadership Development Program, located on the campus of the University of North Carolina at Greensboro, to secure official clearance from both the Leadership Development Program Office and the Mid-Atlantic Regional Office, in order to permit release of names and addresses for the subjects in groups of two, three, and four. Permission for the study was also granted by the Southeast Regional Office of Head Start.

Development of the Scale

A Likert-type scale comprised of characteristics considered in human service aides, teacher aides, child care aides, home health aides, social work aides, neighborhood youth program, and other paraprofessionals was developed for this research.

A Likert-type scale was selected for this research because its method lends itself to the type of research involved in this study. According to Kerlinger (1964), the summated rating is composed of a set of attitude items of approximately equal attitude value. Subjects can respond to these items with degrees of agreement or disagreement and as a result be placed on an agreement continuum of the attitude under study. The Likert-type scale has two major characteristics which make it advantageous to use: (1) the Universe of items is considered to be a set of items of equal attitude value, thus there is no scale of items--each item is the same as any other item in value. The respondents are scaled through use of the sums, or averages, of individual responses. (2) Intensity of attitude is expressed through this summation of ratings. A subject can express varying levels of agreement. The use of five or seven response categories allows greater variance than if only two or three categories existed. A scale such as the Likert-type has advantages useful to research such as that involved in this project.

The Mazyck Rating Scale for Paraprofessionals (MRSP)

A review of the literature on paraprofessionals provided a large number of characteristics, shown in Table 1, which have been used to describe the paraprofessional, aide, assistant, or nonprofessional in a variety of fields in which human services have been provided. The characteristics

shown in Table 1 having a frequency of two or more were selected for inclusion in the scale. A further breakdown of these characteristics was made so that each item in the scale would involve only one characteristic. The scale included 46 separate items which were randomly placed. Each item was stated as a short, simple, concise sentence to be rated on a five-point scale ranging from Strongly Agree, Agree, Undecided, Disagree, to Strongly Disagree. Each respondent was asked to mark his opinion on each statement by making a cross (X) in the parentheses in the proper column that follows the statement. Attached to each rating scale was a short personal data sheet to be completed by the respondent.

Selection of the Items and Categories for the MRSP

In order to prepare the scale of 46 items, the following steps were taken:

1. A list of characteristics was made from Table 1, Frequency Distribution of Characteristics Used for the Selection of Paraprofessional Workers as Found in Selected References. The items selected had a frequency of two or more. Any characteristic involving more than one significant idea was separated into two or more individual items. A list of 78 items was derived from this procedure.

2. A group of six judges was given the previously described list of characteristics. These judges were three people who were considered professional child care specialists by virtue of their training and three persons who worked as aides in a child care project which received federal funds.

3. A packet of index cards, a direction sheet, and a definition for each of four categories was given each judge. The instructions to the judge stated that each card should be placed in one of the four categories, personal-social, biographical, educational, and working relationships. The definitions defined operationally each category.

4. The judges were asked to perform the categorizing of the items twice in order to establish interjudge reliability.

5. A record was made of each judge's categories. The tally of results showed each category into which a judge placed each of the 78 items on two separate trials spaced more than two days apart. An assessment of the two trials was made to find out the items on which the judges in trial one and trial two agreed a minimum of 66 percent of the time on any one item. This assessment yielded 47 items on which agreement in both trials existed at a minimum of 66 percent.

6. In order to simplify categories and the understanding of categories, the categories on Educational, Biographical and Working Relationships were collapsed into one category.

7. The categories of the scale were then designated as Category I, Personal-Social; and Category II, Educational-Biographical-Working Relationships. The Personal-Social Category contained 23 items and Educational-Biographical-Working Relationships Category contained 24 items.

8. Through random selection, one item was dropped from the Educational-Biographical-Working Relationships Category. The full scale contained 23 items in each category for a total of 46 items.

The panel of judges was used to establish the validity of the scale through interjudge agreement. The judges established agreement on 46 items from the original list of seventy-eight items, by agreeing that these items fell into one of four categories.

Procedures Used in Administering the MRSP to Subjects

The Mazyck Rating Scale for Paraprofessionals (MRSP) was prepared in mimeographed form. A first page of directions was included, and a personal data sheet was attached to the scale. The directions were short, simple and to the point, as was the personal data sheet.

The instructions and the rating scale were the same for all four groups of respondents. However, the personal data sheet was different for the child development specialists, the directors, and the aides. The color of paper used for the instrument with the four groups was different.

In addition, each scale and personal data sheet was mailed with a self-addressed, stamped envelope included for return mail. A special letter was sent along with the scale describing the details of the project and the reason the respondents were being asked to participate. The letters were different for the child development specialists and for the directors. The letters for the directors included information on the administration of the MRSP to the aides.

Method of Analysis

The computer program selected for statistical analysis was the Statistical Analysis Systems (SAS). Data from the responses of subjects to the MRSP were analyzed using factor analysis and multivariate analysis of variance. The data were considered by items, categories, (Personal-Social, Educational-Biographical-Working Relationships), and by groups (child development specialists, child care program directors, trained paraprofessionals, and untrained paraprofessionals). The personal data sheets were analyzed using sums, means, and percentages.

Findings of the Original Research

The problem of the original research was to analyze characteristics of paraprofessional child care workers as determined by ratings given on a scale of paraprofessional worker characteristics. The scale was derived from an extensive search of the literature which included types of human service aides: child care aides, teacher aides, social work aides, home health aides, and many other kinds of nonprofessional aides or assistants. The scale of characteristics used in this study was called the Mazyck Rating Scale for Paraprofessionals and comprised two categories of characteristics: Personal-Social and Educational-Biographical-Working Relationships.

The subjects selected for the investigation were divided into four groups: (1) a group of 67 nationally known child development specialists; (2) 197 child care program directors from Head Start; (3) 197 trained paraprofessionals who worked with the directors; and (4) untrained paraprofessionals who worked with the directors. All of the paraprofessionals and the directors worked in the Mid-Atlantic Region of Head Start, or the Southeast Region, if they were employed in Kentucky or North Carolina. Responses to the MRSP and an attached Personal Data Sheet were solicited

from a total of 658 individuals. Analyzed responses were completed on 390 subjects.

The responses to the instruments used in this study were subjected to the Statistical Analysis Systems computerized program. A factor analysis and multivariate analysis of the MRSP data was completed. Frequencies, means, and percentages were computed for the data from the Personal Data Sheets. The factor analysis pointed out that the categories of the MRSP designated by the investigator were significant. The factor analysis also pointed out the existence of a third category which was given the name Reaction to Stress, since the majority of the items related to stressful situations.

Examination of rotated factor matrix loadings pointed out 14 underlying factors in the MRSP. Of this number, nine factors were readily identified and items in the MRSP were designated for the factors. The five factors that could not be named did not have enough items in the MRSP to represent the factor and the lower factor loadings could not assist in verifying the factor.

A study of each category with the four groups using a one-way multivariate analysis of variance revealed a significant F for all categories, including Reaction to Stress. This finding did not verify a null hypothesis of no difference between the groups rating the categories of the MRSP. The MRSP differentiated characteristics into categories when rated by the subjects in this study. The data demonstrated that the MRSP had three categories of items, and that the items can be placed under nine major headings or factors.

The sample to whom the Mazyck Rating Scale for Paraprofessionals (MRSP) was administered was composed of three groups that were similar: the untrained aides, the trained aides, and the child care directors. The fourth group, the child development specialists, were dissimilar and account for significant differences when combined with certain of these groups and compared with others in combination. The major hypothesis of this research - that child development specialists, child care directors, and child care paraprofessionals would differ significantly in rating characteristics of paraprofessionals - was verified.

Several conclusions were drawn from the data using the Mazyck Rating Scale for Paraprofessionals (MRSP).

1. Future use of the MRSP should consider three categories: Personal-Social, Educational-Biographical-Working Relationships, and Reaction to Stress.

2. The items in the MRSP which were not verified under some of the factors ought to be dropped from the scale.

3. The items of the MRSP should be written in a manner that is more easily read and understood by the paraprofessional. A change in language may result in different ratings on the items than those revealed in this study.

4. A common group of characteristics that applies to all paraprofessional child care workers is eminent. This study has identified some characteristics which have been categorized, placed under factor headings, and are capable of being rated by different groups of people in the child care field.

5. Further research in the area of paraprofessional characteristics needs to be done to determine ways of quantitatively measuring the characteristics and relating these measures to identifiable behavior. These measures need to be of such a type that the average paraprofessional could be easily assessed. Also, the measures should be easy to use and interpret by those who regularly supervise paraprofessionals.

6. The original investigation was considered as a first stage investigation of generalized child care paraprofessionals' characteristics. Caution should be taken in making broad generalizations based on this study. More research involving a nation-wide sample of subjects from work-related areas similar to the subjects of this study should be considered prior to drawing conclusions about paraprofessional characteristics.

CHAPTER II

REPLICATION STUDY

Procedure

In 1973, a study was made of Head Start personnel in Region IX of the Head Start Program. This region included the states of Arizona, California and Nevada. With permission from the regional director, contact was made with center directors who were in charge of groups of centers, and these directors were requested to select from among their staff an untrained and a trained Head Start aide. The determination of trained aide was based on one who had received training at a leadership development training center. The determination of untrained aide was based on one who had received only in-service training through the local program. The directors were requested to participate in the study along with the aides. They were sent three similar questionnaires: The Mazyck Rating Scale for Paraprofessionals (MRSP) which was developed in 1971 for the study.

Child Care Paraprofessional: Characteristics for Selection Mazyck, 1971)

In this exploratory field study, the subjects were requested to indicate their opinion regarding the characteristics, on a Likert-type rating scale, that they felt should be found in a "desirable" child care paraprofessional worker. In the context of this writing, "desirable" refers to being more like a professional child care worker than like an untrained paraprofessional child care worker.

The list of subjects obtained from Region IX of Head Start was polled by a letter which explained the research and its purpose. Eighty-five Head Start Directors were polled; of this number, 70 agreed to participate in the research along with an equal number of trained aides, and an equal number of untrained aides.

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Group I - 70 Head Start Center Directors from Region IX.

Group II - 70 Head Start Aides who were considered by their directors as being trained.

Group III - 70 Head Start Aides who were considered by their directors as being untrained; i.e., they had no formal training except that which was received on the job.

Group IV - 67 Child Development Specialists of national reputation.[1]

The child development specialists were known throughout the United States for their contributions to the literature in this area. Mazyck (1971) listed the sources from which the specialists were obtained and listed them by name. [See Appendix E]

The MRSP was developed by Mazyck (1971) in his study of child care paraprofessional characteristics using persons from the Mid-Atlantic Region of Head Start and a group of Child Development Specialists. The Likert-type scale has merit for this type of research in that it allows opportunity for the respondent to express an attitude on a variety of different ideas relating to a single theme. The intensity of the attitude may vary on a five-response scale.

Mazyck (1971) developed the rating scale from a review of the literature on paraprofessionals. The 46 item scale was derived from characteristics found in the literature with a minimum frequency of two. The items were short, and concisely stated, and were to be rated on a five point scale ranging from Strongly Agree, Agree, Undecided, Disagree, Strongly Disagree. The respondents made checks on the scale to identify their choices. [See Appendix A for a copy of the rating scale].

Attached to each MRSP was a short Personal Data Sheet which asked a variety of questions on the respondents' education, family background, and work experience. The questions asked the aides were the same, however, variation in questions occurred in the Personal Data Sheets for the other groups of respondents. [See Appendix B for copy of Personal Data Sheet].

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[1] The Child Development Specialists' rating scale data used in this study was the original data provided on the computer data cards used by Mazyck in Child Care Paraprofessional: Criteria for Selection, 1971

The Mazyck Rating Scale for Paraprofessionals (MRSP) was a mimeographed, color-coded form: yellow (Head Start Directors); pink (untrained aides); blue (trained aides). Each scale had a set of short directions which were the same for all persons in the study.

Each director was mailed a packet of information which included a scale and Personal Data Sheet for himself, one trained aide and one untrained aide. A self-addressed, stamped envelope was included with each scale to be used in mailing the completed information. A special letter to the director told him how to distribute the materials and the date when all returns were due.

Five and one-half weeks from the date the rating scales were sent to the respondents, a follow-up letter was sent with additional scales reminding the subjects that the research was in progress and the information was needed to complete the report of findings. [See Appendix C and D for copies of all letters used].

Method of Analysis

The Statistical Analysis System (SAS) computer program was selected for the analysis and a multivariate analysis of variance (MANOVA) was used on the data received from responses on the rating scale. The rating scale data were considered by items, categories (Personal-Social, Educational-Biographical-Working Relationships), and by groups (child development specialists, child care program directors, trained paraprofessionals, and untrained paraprofessionals). The personal data sheet was examined through the use of percentages and frequencies.

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CHAPTER III

ANALYSIS OF DATA

In analyzing the data, the total numbers of responses available were: 49 child care directors, 48 untrained aides, 36 trained aides, 36 child development specialists. Many of the participants who had promised to be part of the study did not return the data for reasons that the investigator could not explain.

A one-way multivariate analysis of variance (MANOVA) was completed on the four groups of subjects, by the three categories, as discussed in the original study (Mazyck, 1971). The original investigation began with two categories (Personal-Social and Educational-Biographical-Working Relationships). As a result of the statistical application, a third category was derived (Reaction to Stress, RS). In the one-way MANOVA, the F value showed a significant F at the .0001 level of confidence. There was a significant difference between the groups (child care directors, trained aides, untrained aides, and child development specialists) and Category I (Personal-Social). A similar significance was observed in the original study on the dependent variable PS [see Table 2]. A MANOVA on the four groups and Category II (Educational-Biographical-Working Relationships) also showed a significant difference at the $p < .0001$ level of confidence with a significant F [see Table 3]. In Category III (RS) a significant relationship at the $p < .0001$ level of confidence was observed between the Category and the four groups [see Table 4]. Tables 3 and 4 showed the similarity in findings in the two studies.

These findings showed that there were significant differences with which the four groups looked at the categories of characteristics, PS, EBW, and RS. There was a rejection in each category of the null hypothesis of no difference among the means at the .0001 level of probability in both the original and replication study.

A study of the means of each of the groups (directors, trained aides, untrained aides, and child development specialists) was made separately; and in certain combinations with each other, these data revealed differ-

Table 2A (1973)
Multivariate Analysis of Variance for Dependent Variable PS, Replication Study

Source	df	SS	MS	F	Probability < F
Groups	3	2183.81	727.94	9.24	.0001
Within	165	12995.78	78.76		
Total	168	15179.59			

Table 2B (1971)
Multivariate Analysis of Variance for Dependent Variable PS, Original Study

Source	df	SS	MS	F	Probability < F
Groups	3	2447.94	815.99	10.60	.0001
Within	386	29705.61	76.96		
Total	389	32153.60			

Table 3A (1973)
Multivariate Analysis of Variance for Dependent Variable EBW, Replication Study

Source	df	SS	MS	F	Probability < F
Groups	3	605.09	201.70	4.93	.0001
Within	165	6744.12	40.88		
Total	168	7349.21			

Table 3B (1971)
Multivariate Analysis of Variance for Dependent Variable EBW, Original Study

Source	df	SS	MS	F	Probability < F
Groups	3	1660.25	553.41	12.46	.0001
Within	386	7144.51	44.41		
Total	389	18804.76			

Table 4A(1973)
Multivariate Analysis of Variance for Dependent Variable RS, Replication Study

Source	df	SS	MS	F	Probability < F
Groups	3	368.76	122.92	17.77	.0001
Within	165	1141.63	6.92		
Total	168	1510.39			

Table 4B (1971)
Multivariate Analysis of Variance for Dependent Variable RS, Original Study

Source	df	SS	MS	F	Probability < F
Groups	3	508.12	169.37	24.76	.0001
Within	386	2639.79	6.84		
Total	389	3147.91			

Table 5A (1973)
Comparison of Means for Groups by Categories

Groups	N	Means		
		PS	EBW	RS
(1) Directors	49	98.8367	37.7755	20.5102
(2) Untrained Aides	48	101.1875	41.6042	19.0833
(3) Trained Aides	36	100.8889	41.6111	18.5278
(4) Child Development Specialists	36	91.7778	37.8889	22.5833

Table 5B (1971)
Comparison of Means for Groups by Categories

Groups	N	Means		
		PS	EBW	RS
(1) Directors	134	99.5970	36.4552	19.2687
(2) Trained Aides	93	99.8602	40.5699	19.0215
(3) Untrained Aides	127	101.0157	41.0236	18.3465
(4) Child Development Specialists	36	91.7778	37.8889	22.5833

Table 6A (1973)
The Combined Means and t Test Results by Categories, Replication Study

PS Category:	$M_2 - (M_1 + M_3) = t\ .823$ $M_1 - M_4 = t\ 3.624^*$ $(M_1 + M_4) - (M_2 + M_3) = t\ 4.150^*$
EBW Category:	$M_2 - (M_1 + M_3) = t\ 1.643$ $M_1 - M_4 = t\ .0784$ $(M_1 + M_4) - (M_2 + M_3) = t\ 3.789^*$
Third Category:	$M_2 - (M_1 + M_3) = t\ .922$ $M_1 - M_4 = t\ 3.587^*$ $(M_1 + M_4) - (M_2 + M_3) = t\ 6.700^*$

*significant ($p < .01$)

Table 6B (1971)
The Combined Means and t Test Results by Categories Original Study

PS Category:	$M_3 - (M_1 + M_2) = t\ 1.28$
EBW Category:	$M_1 - M_4 = t\ 1.14$ $M_1 + M_4) - (M_2 + M_3) = 2\ 4.683^*$

*significant ($p < .01$)

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ences among the means. Table 5 shows the means for the groups and categories. Table 6 shows the combined means and t test results for each category.

A study of these means and the application of a t test in the PS category compared untrained aides with directors and trained aides, and gave a value of .823, which was not significant. For this category, when child care directors and child development specialists were compared, a significant t 3.624 was obtained. A significant t was obtained when child care directors and child development specialists were grouped and compared with untrained aides and trained aides. This data implied that of the four groups, the child development specialists emphasized this category least. In the test of combined means, the trained and untrained aides emphasized this category more than the combination, child care directors and child development specialists.

In the EBW category, the data showed that there was no significant difference when the untrained aides were compared with the combination of child care director and trained aide. When the child care directors and the child development specialists were compared again, no significance was obtained. However, again, as with the PS category when the combinations were made--child care directors and child development specialists compared with untrained and trained aides--a significant t was observed, indicating a distinct difference in the manner in which these two combined groups emphasize this category.

In the third category (RS) the same comparisons were made as in the PS and EBW categories. The results showed that there was no significant difference in the means for the untrained aides, when compared with the combined child care directors and trained aides. When the child care directors and the child development specialists were compared, a significant difference was obtained. Significance was also obtained when child care directors and child development specialists were combined and compared with the combination, untrained and trained aides.

These data imply that apparently the child development specialists' concepts of these categories make a difference when combined with other groups, and the difference may be due to the child development specialists' interpretation and understanding of the items in the rating scale. The matter of interpretation of items may apply to all categories of the scale. It may again be observed that in testing the means by categories, the original study and the replication study had similar significant values, even though the replication tests were extended beyond those of the original study.

Analysis of the Categories

The original configuration of the items in the MRSP into the two categories, Personal-Social and Educational-Biographical-Working Relationships, was made by Mazyck (1971, p. 52-54). This categorizing of items occurred prior to the contact with respondents in the study in 1971.

The factor analysis of the total items (46) on the MRSP showed a different breakdown of items for two categories; Personal-Social and Educational-Biographical-Working Relationships, than that purposed by Mazyck (1971). Factor loadings obtained from the factor matrix provided the data which are shown in Table 7.

Table 7A (1973)

Factor Loadings of the First, Second and Third Factors Used to Designate Categories on the MRSP

Item	Factor Loading 1	2	3	Categories[a]
Q1	.21002	-.36440	-.45680	Third
Q2	..31788	-.13611	..13368	PS
Q3	.28310	.08826	-.11599	PS
Q4	.33742	.14494	-.03719	PS
Q5	-.20632	-.15055	.10940	*PS
Q6	..29045	-.36840	.00250	EBW
Q7	.21959	.05322	.01075	*PS
Q8	..02775	-.45717	.14386	EBW
Q9	.52236	.30071	.16830	PS
Q10	-.21908	.00929	.22741	Third

(Table continued on next page)

In Table 7 it was observed that as a result of the factor loadings in the factor analysis, some of the items changed categories differently than those suggested in the original categories and in the statistically derived categories of the 1971 research. (Mazyck, 1971, p. 55-56.) In the present research and in the 1971 research, there was some exchange in items moving from the PS Category to the EBW Category, and to the Third (RS) Category. In some cases, items moved in the reverse direction, with the exception of the Third Category. The Third Category, Reaction to Stress, was derived by the statistical procedures. The exchange of scale items from the original category in which they

Table 7A (1973) Continued

Factor Loadings of the first, Second and Third Factors Used to Designate Categories on the MRSP

Item	Factor Loading 1	2	3	Categories[a]
Q11	.60758	-.17193	-.03104	PS
Q12	.27511	-.30590	.24360	EBW
Q13	.07811	-.47272	.37212	EBW
Q14	.70719	.14456	.03185	PS
Q15	.59226	.35367	.21189	PS
Q16	.60760	.1445	-.24729	PS
Q17	.44492	-.44101	-.14226	PS
Q18	-.04483	-.53185	-.03908	EBW
Q19	.53812	-.13099	-.01851	PS
Q20	-.08390	-.55994	.06926	EBW
Q21	.52800	-.21310	-.27658	PS
Q22	.01060	.41624	.25079	*EBW
Q23	-.17452	-.53228	.12023	EBW
Q24	-.11580	-.44381	-.06004	EBW
Q25	.54870	-.01846	-.15251	PS
Q26	.31573	.02445	.01096	PS
Q27	.66333	-.04235	-.15349	PS
Q28	-.25559	-.31662	-.24828	EBW
Q29	.13640	-.48547	.14912	EBW
Q30	..09210	-.47365	.46496	EBW
Q31	.14858	.57991	..23956	*EBW
Q32	.54149	.20854	.09134	PS
Q33	.53670	.09478	.09983	PS
Q34	-.00603	-.21123	.38582	Third
Q35	.65452	-.12495	-.27787	PS
Q36	.58911	.00412	.17279	PS
Q37	.30930	-.34359	.24851	EBW
Q38	.65515	-.21143	-.08675	PS
Q39	.27424	-21186	-.45799	Third
Q40	.49373	.21696	.24619	PS
Q41	.36592	.02792	.19014	PS
Q42	.23225	-.30479	.24966	EBW
Q43	.10128	-.24869	.33111	Third
Q44	.52160	.20968	.13217	PS
Q45	.67442	.11986	.05985	PS
Q46	.44538	.34947	.06618	PS

[a]Categories: PS Personal-Social
EBW Educational-Biographical-Working Relationships
Third Reaction to Stress (RS)

*Items in the Replication Study That Differ from the Original Study

Table 7B (1971)

Factor Loadings of the First, Second, and Third Factors Used to Designate Categories on the MRSP

Item	Factor Loading 1	2	3	Categories
Q1	.23736	.09439	-.33993	Third
Q2	.37059	.06268	.13286	PS
Q3	.42072	.03597	-.01612	PS
Q4	.35000	-.21812	-.02148	PS
Q5	-.17044	.15635	.33548	Third
Q6	.20401	.52846	.06276	EBW
Q7	.25386	.33888	.18460	EBW
Q8	.04008	.51389	-.00676	EBW
Q9	.45453	-.20758	.10682	PS
Q10	-.16744	.08265	.43048	Third
Q11	.62329	-.03859	-.19029	PS
Q12	.25467	.44681	.11569	EBW
Q13	.06069	.49062	.24073	EBW
Q14	.52707	-.21590	.11933	PS
Q15	.51373	-.33665	.12354	PS
Q16	.40691	.12081	-.11540	PS
Q17	.49995	.39463	-.11835	PS
Q18	-.15779	.47980	.18484	EBW
Q19	.59485	.18611	-.12513	PS
Q20	-.04617	.50778	.21080	EBW
Q21	.61078	.19618	-.17867	PS
Q22	.06390	-.26451	.34532	Third
Q23	-.05234	.60993	-.01168	EBW
Q24	-.15460	.29246	.07580	EBW
Q25	.61330	.01028	-.13371	PS
Q26	.29069	.01805	.16690	PS
Q27	.55137	.13958	-.17986	PS
Q28	-.34481	.44363	.18573	EBW
Q29	.10998	.53492	-.00517	EBW
Q30	.21280	.51792	.09427	EBW
Q31	.09906	-.50231	.35563	Third
Q32	.46961	-.13534	.22379	PS
Q33	.59168	-.00232	.09992	PS
Q34	.08936	.29596	.35671	EBW
Q35	.62631	.06764	-.15959	PS
Q36	.54367	-.07750	.12165	PS
Q37	.19124	.38358	-.00525	EBW

(Table continued on next page)

were placed prior to this research, as compared with how they were placed in categories as a result of the factor loadings in 1971 and 1973, is shown in Table 8.

The Third Category, Reaction to Stress, was developed statistically from items with high loadings on the third factor or some other of the factors four through fourteen. This newly derived category was given the name Reaction to Stress because both in 1971 and in 1973, the items seemed to relate to stressful situations.

Naming the Factors in the Analysis

A factor analysis completed for this study developed 14 basic factors underlying the 46 items in the MRSP. The factors were arbitrarily

Table 7B (1971 Continued)

Item	Factor Loading 1	2	3	Categories[a]
Q38	.61014	.07387	-.12357	PS
Q39	.08637	.04581	-.29652	Third
Q40	.44525	-.17031	.25526	PS
Q41	.43082	-.15319	.12118	PS
Q42	.32900	.26579	.12150	EBW
Q43	.24841	.13695	-.12332	PS
Q44	.52538	-.25916	.22370	PS
Q45	.66119	-.01473	.05874	PS
Q46	.49028	-.30219	.25101	PS

[a]Categories: PS Personal-Social
EBW Educational-Biographical-Working Relationships
Third Reaction to Stress (RS)

given names as a result of observing the scale items that verified each factor. The verification was made on the basis of having at a minimum two scale items to verify each factor and to have a supportive loading of .50 in the rotated factor matrix.

In comparing the 1971 research with the 1973 research, it was noted that fourteen factors were brought out, but the factors had to be named differently because the arrangement of scale items for purposes of verification appeared to be considerably different. In the 1971 research, five factors remained nameless and were not successfully verified by scale items, while in the current research three factors were unnamed and not verified by scale items. The differences in the two groups of factors were observed as not being decidedly different; it was more a regrouping of items with a renaming of factors with appropriate captions. These factors were named in Table 9. 00041

Table 8
Comparison of Original Items by Categories as a Result of Factor Loadings from 1971 and 1973 Research

Items	Categories		
	Original	1971	1973
Q1	PS	Third	Third
Q2	PS	PS	PS
Q3	EBW	PS	PS
Q4	PS	PS	PS
Q5	PS	Third	PS
Q6	EBW	EBW	EBW
Q7	EBW	EBW	PS
Q8	EBW	EBW	EBW
Q9	EBW	PS	PS
Q10	PS	Third	Third
Q11	PS	PS	PS
Q12	EBW	EBW	EBW
Q13	EBW	EBW	EBW
Q14	PS	PS	PS
Q15	PS	PS	PS
Q16	PS	PS	PS
Q17	PS	PS	PS
Q18	EBW	EBW	EBW
Q19	PS	PS	PS
Q20	EBW	EBW	EBW
Q21	PS	PS	PS
Q22	EBW	Third	EBW
Q23	EBW	EBW	EBW
Q24	EBW	EBW	EBW
Q25	PS	PS	PS
Q26	PS	PS	PS
Q27	PS	PS	PS
Q28	PS	EBW	EBW
Q29	EBW	EBW	EBW
Q30	EBW	EBW	EBW
Q31	EBW	Third	EBW
Q32	EBW	PS	PS
Q33	EBW	PS	PS
Q34	EBW	EBW	Third
Q35	EBW	PS	PS
Q36	PS	PS	PS
Q37	EBW	EBW	EBW
Q38	PS	PS	PS
Q39	PS	Third	Third
Q40	PS	PS	PS
Q41	PS	PS	PS
Q42	EBW	EBW	EBW
Q43	EBW	PS	Third
Q44	EBW	PS	PS
Q45	EBW	PS	PS
Q46	PS	PS	PS

00042

Table 9A (1973)
The Named Factors in the Factor Analysis
and the Scale Items Found in Each Factor

Factor	Scale Items	Justification of Name Dependent on Factor Loadings .50+ on Rotated Factor Matrix
1. General Personal Qualities	17,19,35,36	Yes. Verification strong with lower loadings
2. Maturity by Sex	20,23,24	Yes. Verification questionable
3. Unnamed	43	No. Supporting data questionable
4. Adaptability	26,27,41	Yes. Verification strong with lower loadings
5. Job Dedication	31,32,40	Yes. Verified by lower loadings
6. General Educational Qualifications	6,12,22	Yes. Verification questionable
7. Work Effectiveness	3, 4	Yes. Verification questionable
8. Middle Level Educational Training	8,13	Yes. Verified by lower loadings
9. Unnamed	5	No. Supporting data questionable
10. Feelings of Security	2,14	Yes. Verification strong with lower loadings
11. Positive Work Attitude	44,46	Yes. Verified by lower loadings
12. Frustration Tolerance	1,39	Yes. Verified by lower loadings
13. Unnamed	34	No. Supporting data questionable
14. Flexibility	10,42	Yes. Verified by lower loadings

00043

Table 9B (1971)
The Named Factors in the Factor Analysis
and the Scale Items Found in Each Factor

Factor	Scale Items	Justification of Name Dependent on Factor Loadings .50+ on Rotated Factor Matrix
1. General Personal Qualities	19,21,25 33,35,38	Yes. Verified by lower loadings
2. Demographic Factors	7, 8,29 30	Yes. Verified by lower loadings
3. Unnamed	3	No.
4. Educational Qualifications	6,12	Yes. Verified by lower loadings
5. Temperamental	13,34	Yes. Verified by lower loadings
6. Maturity	20,24	Yes. Verified by lower loadings
7. Work Effectiveness	3, 4	Yes. Verified by lower loadings
8. Frustration Tolerance	1,39	Yes. Verification questionable
9. Unnamed	10	No. No supporting data
10. Unnamed	26	No. No supporting data
11. Positive Work	32,44,46	Yes. Verification strong with lower loadings
12. Feelings of Security	14,15	Yes. Verification strong with lower loadings
13. Unnamed	43	No. Supporting data questionable
14. Unnamed	None	No. Supporting data questionable

00044

The items in the MRSP have been statistically placed into three categories as a result of the factor analysis. Table 10 shows the complete placement of the 46 scale items by category: the Personal-Social, Educational-Biographical-Working Relationships, and the

Table 10A (1973)
Division of Items on the MRSP Into Categories
As a Result of Factor Analysis

Personal-Social			Educational-Biographical-Working Relationships		Reaction to Stress
Items			Items		Items
Q2	Q15	Q33	Q6	Q24	Q1
Q3	Q16	Q35	Q8	Q28	Q10
Q4	Q17	Q36	Q12	Q29	Q34
Q5	Q19	Q38	Q13	Q30	Q39
Q7	Q21	Q40	Q18	Q31	Q43
Q9	Q25	Q41	Q20	Q37	
Q11	Q26	Q44	Q22	Q42	
Q14	Q27	Q45	Q23		
	Q32	Q46			

Table 10B (1971)
Division of Items on the MRSP Into Categories
As a Result of Factor Analysis

Personal-Social			Educational-Biographical-Working Relationships		Reaction to Stress
Items			Items		Items
Q2	Q17	Q35	Q6	Q24	Q1
Q3	Q19	Q36	Q7	Q28	Q5
Q4	Q21	Q38	Q8	Q29	Q10
Q9	Q25	Q40	Q12	Q30	Q22
Q11	Q26	Q41	Q13	Q34	Q31
Q14	Q27	Q43	Q18	Q37	Q39
Q15	Q32	Q44	Q20	Q42	
Q16	Q33	Q45	Q23		
		Q46			

Third, which was designated Reaction to Stress. Comparison of Table 10A and 10B reflects the degree of similarity of the items into the three categories as found in both studies.

Multiple Correlational Analysis

The multiple correlations were completed on three groups of subjects: child care directors, trained aides, and untrained aides. Data on these three groups were similar, whereas there were some data on the child development specialists that were dissimilar, making correlations inadvisable.

In the multiple correlations the same factors were used in both studies: gender, age, amount of college training, years in child care work, the statistically derived personal-social category, the original personal-social category, the statistically derived educational-biographical working relationship category, and the third category (see Tables 11,12,13).

The multiple correlations showed high relations between the statistically derived personal-social category and the original personal-social category in the three groups in both studies. The high relationship was also observed between the statistically derived educational-biographical-working relationship category in each of the three groups. The same type of high relationship was reported by Mazyck (1971). Again, this tends to point to a similarity between the two original categories and their statistically derived counterparts developed from the rotated factor matrix. Implications from these data indicate that the categories in the MRSP were well specified, as had been pointed out in the earlier research. The relationship between the third category and the original PS and EBW categories was either negative or exceedingly low. This finding gives evidence that the third, or RS category, has little or no relationship in regard to its significance on the scale. Little relationship was observed between the other items selected for intercorrelations, thus signifying a lack of real significance among these items. Tables 11, 12, and 13 show all of the significant intercorrelations which varied from directors, to trained aides, to untrained aides. The data provided by this research showed fewer significant intercorrelations than that provided by the 1971 data. Thus, it may be assumed that the Far West respondents gave little consideration to the data selected for correlation analysis.

Gender, age, college training, years of child care work experience, and the third category had either negative or low relationship in the intercorrelations in all three of the groups considered for correlation, with three exceptions. For directors and trained workers, a relationship was obtained for age and child care work; for untrained aides, high relationship was obtained for gender and age. Sex, age and experience in child care appear as important to the 1971 respondents as well as to the 1973 respondents.

Table 11A (1973)

Child Care Directors

Multiple Correlation of Selected Personal Data With Categories Originally Determined and Statistically Determined

	1	2	3	4	5	6	7	8	9	Mean	S.D.
1 Gender		.093	.288	-.205	.020	.167	.324	.011	.143	1.229	.425
2 Age			.180	.510*	.018	.104	.133	.043	.069	4.875	1.817
3 College Training				.020	.145	.031	.120	.110	.104	4.417	.942
4 Child Care Work Experience					.016	.051	-.155	.042	.016	5.958	2.083
5 PS Category						.342	-.120	.926*	.616*	98.958	8.846
6 EBW Category							-.107	.357*	.909*	37.708	6.345
7 Third Category								-.111	-.027	20.479	2.895
8 Original PS									.560*	85.854	7.386
9 Original EBW										73.645	7.659

*(N = 48; df 46; .354 = p < .01)

00047

Table 11B (1971)

Child Care Directors

Multiple Correlation of Selected Personal Data With Categories
Originally Determined and Statistically Determined

	1	2	3	4	5	6	7	8	9	Mean	S.D.
1 Gender		-.114	.241	.372*	.059	.137	-.078	.077	.110	1.310	.465
2 Age			-.249	-.371*	-.032	-.000	.152	.016	-.012	5.023	1.735
3 College Training				.296*	.008	-.078	-.061	-.059	-.016	4.726	.766
4 Child Care Work Experience					.041	-.003	.099	.067	.024	3.619	2.082
5 PS Category						.149	-.189	.928*	.524*	99.690	9.729
6 EBW Category							-.319*	.262	.878*	36.690	6.651
7 Third Category								.144	-.276*	19.238	2.714
8 Original PS									.561*	87.214	7.216
9 Original EBW										72.155	7.308

*(N = 84; df 82; .267 = p < .01)

84068

69049

Table 12A (1973)

Trained Aides

Multiple Correlation of Selected Personal Data With Categories Originally Determined and Statistically Determined

	1	2	3	4	5	6	7	8	9	Mean	S.D.
1 Gender		.058	.049	.131	-.020	-.036	.000	-.267	.048	1.087	.288
2 Age			-.385	.512*	-.101	-.100	.300	-.003	-.262	3.739	1.421
3 College Training				-.396	.422	-.235	.321	.212	-.013	2.304	1.259
4 Child Care Work Experience					.153	.147	-.012	.363	.022	5.739	1.839
5 PS Category						-.555*	.096	.849*	-.362	101.957	7.042
6 EBW Category							.069	-.393	.844*	40.783	6.842
7 Third Category								.153	.251	19.000	2.023
8 Original PS									-.349	90.087	6.022
9 Original EBW										76.478	6.721

*(N = 23; df 21; .487 = p < .01)

Table 12B (1971)

Trained Aides

Multiple Correlation of Selected Personal Data With Categories
Originally Determined and Statistically determined

	1	2	3	4	5	6	7	8	9	Mean	S.D.
1 Gender		.031	.105	-.077	-.118	.154	-.022	-.038	.004	1.044	.208
2 Age			.299	.170	.014	.110	.015	.087	.130	4.267	1.657
3 College Training				.224	.130	.101	-.052	.224	.066	.956	1.127
4 Child Care Work Experience					-.079	-.215	-.026	-.087	-.126	4.178	1.922
5 PS Category						.409*	.059	.920*	.709*	102.622	9.480
6 EBW Category							.179	.483*	.893*	40.178	8.843
7 Third Category								.084	.216	19.222	2.173
8 Original PS									.714*	89.378	7.915
9 Original EBW										76.333	8.132

*(N = 45; df 43; .372 = p < .01)

T6000
00051

Table 13A (1973)

Untrained Aides

Multiple Correlation of Selected Personal Data With Categories Originally Determined and Statistically Determined

	1	2	3	4	5	6	7	8	9	Mean	S.D.
1 Gender		-.481*	.230	-.407	.043	-.247	-.205	-.060	-.130	1.156	.369
2 Age			.048	-.216	-.216	-.016	.202	-.104	-.072	4.156	1.780
3 College Training				.095	.002	.073	.111	-.016	.151	1.687	1.355
4 Child Care Work Experience					.085	.126	-.137	.161	.023	4.281	2.453
5 PS Category						.066	-.323	.881*	.388	100.563	8.458
6 EBW Category							-.145	.238	.856*	40.938	6.618
7 Third Category								-.377	.062	19.281	2.738
8 Original PS									.380	87.750	6.900
9 Original EBW										77.031	6.818

*(N = 32; df 30; .449 = p < .01)

Table 13B (1971)

Untrained Aides

Multiple Correlation of Selected Personal Data With Categories Originally Determined and Statistically Determined

	1	2	3	4	5	6	7	8	9	Mean	S.D.
1 Gender		.077	-.069	-.023	.258	.052	.113	.259	.110	1.016	.127
2 Age			.195	.310	-.030	-.259	.116	-.131	-.173	4.048	1.593
3 College Training				.106	.291	.142	.049	.278	.262	.548	1.019
4 Child Care Work Experience					.022	.015	.002	-.042	.026	3.323	1.827
5 PS Category						.274	.013	.881*	.568*	102.371	7.318
6 EBW Category							.054	.353*	.890*	41.242	6.794
7 Third Category								.135	.101	18.711	2.433
8 Original PS									.561*	89.758	6.603
9 Original EBW										76.806	7.270

*(N = 62; df 60; .325 = p < .01)

Analysis of Personal Data

Personal data on the four groups of subjects were similar in that the same questions were asked of all subjects in five specific areas: gender, marital status, parents of children, parents of children under age six, and age range. The responses to the questions were obtained from the personal data sheet attached to each MRSP. Tables 14 through 19 show the findings.

Table 14 showed, as anticipated, a higher percentage of women doing child care work as compared to men. However, there was an increase in the percent of untrained male aides than was observed by Mazyck (1971). These data may be considered to show the very small but steady flow of males into work with young children. Among the specialists, males predominated. This figure would be expected to include researchers, teachers, writers, and others, as well as those who work directly with children. It is difficult to say that the high percentage of male child development specialists means more are entering the field.

Two-thirds of the respondents used in this study were married and one-eighth were single, while the remainder were scattered into other areas (See Table 15). Of the subjects studied, approximately one-eighth were parents. Of this number, most of the parents had one boy-child and one girl-child. The same number of respondents reported having two boys and two girls. Most of the respondents had no children under age six. If they had children under six, it was most often one child. In the tables mentioned, some marked similarities are noted in the 1973 and 1971 findings (See Tables 16, 17-1, 17-2, 18, and 19).

On further investigation, the great majority of the child development specialists and directors were found to be 36 years old or older. Most of the untrained aides were over 31 years old, as were the trained aides. All of the aide respondents generally tended to be somewhat older than those reported by Mazyck (1971). Directors and specialists were the older persons in each of the groups studies.

In comparing the educational attainment of the two groups of aides, the data showed that two-thirds of the untrained aides had graduated from high school and one-third had not graduated. Among the trained aides, sixty percent had graduated from high school and forty percent had not. In 1971, Mazyck reported a high percent of high school graduates among the trained aides, while he reported approximately the same percent of high school training among the untrained aides. Among the directors in the 1973 research, 98 percent had graduated from high school, while 2 percent did not graduate. In the 1971 research, 100 percent of the directors had completed high school.

Table 14A (1973)

Analysis of Personal Data by Gender

	Female	Percent	Male	Percent
Child Development Specialists	16	44.444	20	55.556
Trained Aides	34	94.444	2	5.556
Untrained Aides	43	89.583	5	10.417
Directors	37	75.510	12	24.490
Totals (n)	130		39	

Note: Different N's were recorded because all respondents did not answer all questions

Table 14B (1971)

Analysis of Personal Data by Gender

	Female	Percent	Male	Percent
Child Development Specialists	16	44.444	20	55.556
Untrained Aides	123	96.850	4	3.150
Trained Aides	88	95.652	4	4.348
Directors	99	73.881	35	26.119
Totals	326		63	

Note: Different N's were recorded because all respondents did not answer all questions.

Table 15A (1973)

Analysis of Marital Status[a]

Group	Marital Status[a] 1	2	3	4	5	6	7	8	9	10
Child Development Specialists	4	11.111	30	83.333			1	2.778	1	2.778
Trained Aides	6	16.667	23	63.889	6	16.667	1	2.778		
Untrained Aides	4	8.333	28	58.333	11	22.917	4	8.333	1	2.083
Directors	5	10.204	32	65.306	10	20.408	1	2.041	1	2.041
Totals (N)	19		113		27		7		3	

Note: Different N's were recorded because all respondents did not answer all questions.

[a]Marital Status:

1 Single
2 Percent Single
3 Married
4 Percent Married
5 Divorced
6 Percent Divorced
7 Separated
8 Percent Separated
9 Widowed
10 Percent Widowed

Table 15B (1971)

Analysis of Marital Status

Group	Marital Status [a]									
	1	2	3	4	5	6	7	8	9	10
Child Development Specialists	4	11.111	30	83.333	0		1	2.778	1	2.778
Untrained Aides	15	11.811	84	66.142	6	4.724	17	13.386	5	3.937
Trained Aides	12	13.043	58	63.043	3	3.261	13	14.130	6	6.522
Directors	32	23.881	86	64.179	5	3.731	2	1.493	9	6.716
Totals (N)	63		258		14		33		21	

Note: Different N's were recorded because all respondents did not answer all questions.

[a]Marital Status:

1 Single
2 Percent Single
3 Married
4 Percent Married
5 Divorced
6 Percent Divorced
7 Separated
8 Percent Separated
9 Widowed
10 Percent Widowed

Table 16A (1973)

Subjects Who Were Parents

Group	Yes	Percent	No	Percent
Child Development Specialists	30	85.714	5	14.286
Trained Aides	30	83.333	6	16.667
Untrained Aides	42	87.500	6	12.500
Directors	35	71.429	14	28.571
Totals (N)	137		31	

Note: Different N's were recorded because all respondents did not answer all questions.

Table 16B (1971)

Subjects Who Were Parents

Group	Yes	Percent	No	Percent
Child Development Specialists	30	85.714	5	14.286
Untrained Aides	110	88.000	14	12.000
Trained Aides	83	90.217	9	9.783
Directors	88	67.692	42	32.308
Totals (N)	311		70	

Note: Different N's were recorded because all respondents did not answer all questions.

Table 17-1 (1973)

Subjects With Boy Children

Group	Number of Boys 0	1	2	3	4	5	6	7
Child Development Specialists	4	14	7	3				
Percent	14.286	50.000	25.000	10.714				
Trained Aides		8	7	5	2	3		3
Percent		28.571	25.000	17.857	7.143	10.714		10.714
Untrained Aides	2	11	12	4	4	2	1	
Percent	5.556	30.446	33.333	11.111	11.111	5.556	2.778	
Directors		17	6	3	2	1		
Percent		58.621	20.690	10.345	6.897	3.448		
Totals (N)	6	50	32	15	8	6	1	3

Note: Different N's were recorded because all respondents did not answer all questions.

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Table 17-2 (1973)

Subjects With Girl Children

Group	Number of girls 0	1	2	3	4	5	6	7
Child Development Specialists	5	10	7	4	1			
Percent	18.519	37.037	25.926	14.815	3.704			
Trained Aides	1	9	3	6	2	4		1
Percent	3.846	34.615	11.538	23.077	7.692	15.385		3.846
Untrained Aides	2	17	12	4	3	1		1
Percent	5.000	42.500	30.000	10.000	7.000	2.500		2.500
Directors	1	9	10	5	1			
Percent	3.846	34.615	38.462	19.231	3.846			
Totals (N)	9	45	32	19	7	5		2

Note: Different N's were recorded because all respondents did not answer all questions.

Table 18A (1973)

Subjects With Children Under Age Six

Groups	Number of Children 0	1	2	3	4	5	Totals
Child Development Specialists	18	7	2				27
Percent	16.667	25.926	7.407				
Trained Aides	7	9	3				19
Percent	36.842	47.368	15.789				
Untrained Aides	16	9	1	1			27
Percent	59.259	33.333	3.704	3.704			
Directors	15	6	2				23
Percent	65.217	26.087	8.696				
Totals (N)							96

Note: Different N's were recorded because all respondents did not answer all questions.

Table 18B (1971)

Subjects With Children Under Age Six

Group	Number of Children 0	1	2	3	4	5	Totals
Child Development Specialist	18	7	2				27
Percent	66.667	25.926	7.407				
Untrained Aides	29	34	8	4		1	76
Percent	38.158	44.737	10.526	5.263		1.316	
Trained Aides	31	15	8	1	1		56
Percent	55.357	26.786	14.286	1.786	1.786		
Directors	47	11	1	1			60
Percent	78.333	18.333	1.667	1.667			
Total (N)							219

Note: Different N's were recorded because all respondents did not answer all questions.

Table 19A (1973)

Age Range of Subjects

Group	16-20	21-25	26-30	31-35	36-40	41-45	46 and over
Child Development Specialists		1	4	9	4	4	15
Percent		2.941	11.765	26.471	11.765	11.765	44.118
Trained Aides		8	7	10	5	2	3
Percent		22.857	20.000	28.571	14.286	5.714	8.571
Untrained Aides	1	6	10	8	5	8	4
Percent	2.381	14.286	23.810	19.048	11.905	19.048	9.524
Directors	1	3	9	9	7	6	14
Percent	2.041	6.122	18.367	18.367	14.286	12.245	28.512
Totals Subjects (N)	2	18	30	36	21	20	36

Note: Different N's were recorded because all respondents did not answer all questions.

Table 19B (1971)

Age Range of Subjects

Group	16-20	21-25	26-30	31-35	36-40	41-45	46 and over
Child Development Specialists		1	4	9	4	4	15
Percent		2.941	11.765	26.471	11.765	11.765	44.118
Untrained Aides	9	12	30	21	16	16	8
Percent	7.627	10.169	25.424	17.797	13.559	13.559	6.780
Trained Aides	3	11	21	13	8	8	12
Percent	3.371	12.360	23.596	14.607	8.989	8.989	13.483
Directors		9	12	20	23	23	44
Percent		6.818	9.091	15.152	17.424	17.424	33.333
Total Subjects (N)	12	33	68	67	63	51	79

Note: Different N's were recorded because all respondents did not answer all questions.

Examination of the data on the untrained aides showed 54 percent having three years and over experience in child care work at the time they completed the MRSP. Fifty-eight percent of the trained aides had four years or more of experience in child care work in the present study. In comparing the trained aides (Mazyck, 1971) there was

Table 20A (1973)

Comparison of Two Groups of Aides and Child Care Directors on Selected Personal Data

Graduation from High School	Trained Aides	Percent	Untrained Aides	Percent	Directors	Percent
Graduated	25	59.524	21	67.742	47	97.917
Did not graduate	17	40.476	10	32.258	1	2.083
Totals (N)	42		31		48	

Table 20B (1971)

Comparison of Two Groups of Aides and Child Care Directors on Selected Personal Data

Graduation from High School	Trained Aides	Percent	Untrained Aides	Percent	Directors	Percent
Graduated	57	70.370	80	68.376	126	100.000
Did not graduate	24	29.630	37	31.624		
Totals (N)	81		117		126	

fifty-six percent who had three years or more of experience in child care work. With the untrained aides, 51 percent had two years or more experience. Evidence appears that both the untrained and trained aides have increased one year in experience working with children since the 1971 study.

An examination of the data on areas of college training of child care program directors revealed that 44 percent had training in areas other than that related to the usual areas that are concerned with child care.

Table 21A (1973)
Comparison of Two Groups of Aides According To
Years in Child Care Work

Years in Child Care Work	Untrained Aides	Percent	Trained Aides	Percent
1 - 6 months	4	8.696	2	5.714
7 - 12 months	8	17.391		
2 years	9	19.656	2	5.714
3 years	5	10.870	10	28.571
4 years	4	8.696	5	14.286
5 years	2	4.348	8	22.857
6 years	8	17.391	3	8.571
7 years	6	13.043	5	14.286
Totals (N)	46		35	

Note: Mean years in child care work for each group: 3.5
Different N's were recorded because all respondents did not answer all questions.

Table 21B (1971)
Comparison of Two Groups of Aides According To
Years in Child Care Work

Years in Child Care Work	Untrained Aides	Percent	Trained Aides	Percent
1 - 6 months	4	4.598	28	23.729
7 - 12 months	19	21.839	25	21.186
2 years	12	13.798	21	17.797
3 years	19	21.839	13	11.017
4 years	19	21.839	14	11.864
5 years	6	6.897	8	6.780
6 years	2	2.899	7	5.932
7 years	6	6.897	2	1.695
Totals (N)	87		118	

Note: Mean years in child care work for each group: 3.5
Different N's were recorded because all respondents did not answer all questions.

Fifty-three percent of the directors have had training in college subjects related to child care activities. In 1971, 65 percent of directors had training in college subjects related to child care activities, and 27 percent had training in other areas of knowledge.

00661

Data from a comparison of two groups of aides and child care program directors showed 89 percent of the directors with over 3 years of child care work, while among the trained aides, 88 percent had 3 years or more of child care work experience. Sixty-two percent of the untrained aides had over 3 years of child care work experience (See Table

Table 22A (1973)
Areas of College Training of Child Care Program Directors

Area	Frequency	Percent
Elementary/Early Childhood Education	17	37.778
Secondary Education	1	2.222
Child Development/Family Relations	3	6.667
Sociology	2	4.444
Physical Education		
Home Economics	2	4.444
Nursing		
Other Areas	20	44.444
Total (N)	45	

Note: Different N's recorded because all respondents did not answer all questions.

Table 22B (1971)
Areas of College Training of Child Care Program Directors

Area	Frequency	Percent
Elementary/Early Childhood Education	47	39.167
Secondary Education	7	5.833
Child Development/Family Relations	5	4.167
Sociology	8	6.667
Physical Education	3	2.500
Home Economics	14	11.667
Nursing	3	2.500
Other Areas	33	27.500
Total (N)	120	

Note: Different N's recorded because all respondents did not answer all questions.

23). The untrained aides had the least amount of experience, while the directors and trained aides had similar amounts of experience in child care work. In 1971, 70 percent of directors, 56 percent of trained aides, and 34 percent of untrained aides had more than 3 years of child care work experience. This increase indicates a holding power that these jobs have for this type of work.

Table 23A (1973)

Comparison of Two Groups of Aides and Child Care Program Directors in Relation to Years in Child Care Work

Years in Child Care Work	Untrained Aides	Percent	Trained Aides	Percent	Directors	Percent
1 - 6 months	4	8.696	2	5.714	1	2.041
7 - 12 months	8	17.391			3	6.122
2 years	9	19.565	2	5.714	3	6.122
3 years	5	10.870	10	28.571	6	12.245
4 years	4	8.696	5	14.286	5	10.245
5 years	2	4.348	8	22.857	6	12.245
6 years	8	17.391	3	8.571	8	16.327
7 years	6	13.043	5	14.286	17	34.694

Note: The median number of years was computed for each group. The untrained aide, 2.9 years; trained aide, 4.2 years; directors, 5.2 years.

Table 23B (1971)

Comparison of Two Groups of Aides and Child Care Program Directors in Relation to Years in Child Care Work

Years in Child Care Work	Trained Aides	Percent	Untrained Aides	Percent	Directors	Percent
1 - 6 months	4	4.598	28	23.729	3	2.679
7 - 12 months	19	21.839	25	21.186	20	17.857
2 years	12	13.793	21	17.797	7	6.250
3 years	19	21.839	13	11.017	19	16.964
4 years	19	21.839	14	11.864	13	11.607
5 years	6	6.897	8	6.780	13	11.607
6 years	2	2.299	7	5.932	7	6.250
7 years	6	6.897	2	1.695	30	26.786

Note: The median number of years was computed for each group. The trained aide, 3.4 years; untrained aide, 2.4 years; directors, 4.5 years.

CHAPTER IV

SUMMARY OF FINDINGS

The current (1973) research proposed to study the characteristics of paraprofessionals in child care in order to determine if there were characteristics, and categories of characteristics, that could be discriminated. The findings were as follows:

1. Characteristics found in the MRSP (Mazyck, 1971) were divided into two categories that proposed to distinguish the child development specialist, child care director, trained paraprofessional, and untrained paraprofessional. There were significant differences found in the comparison of the four groups of subjects.

2. Analysis of factor loadings by factor analysis technique showed the MRSP had categories that were distinguishable (Personal-Social and Educational-Biographical-Working Relationships), and similar to those proposed by Mazyck (1971). The rotated factor matrix loadings verified these categories and a statistically derived third category named Reaction to Stress.

3. The F tests on the three categories, Personal-Social, Educational-Biographical-Working Relationships, and Reaction to Stress, were significant when compared by groups at $p < .0001$.

4. Examination of the means of the four groups of subjects in regard to their relationships with the three categories, using t tests, showed no significant differences when untrained aides were compared with the combination, trained aides and directors, on the PS category. The child development specialists accounted for the significant difference in the way the subjects rated the Personal-Social category.

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In the EBW category, a t test applied to means of the child care directors compared with the child development specialists showed no significant difference. When the means of child care directors and child development specialists were added and compared with combined means of trained aides and untrained aides, a significant t at the $p < .01$ level was obtained. Child development specialists made the difference when added to groups in combination. Similarity in groups was observed among the directors, trained aides, and untrained aides.

The means of the subject groups in relation to the RS (third) category were not significant for the subjects, except the child development specialists, who apparently accounted for all the significant differences. The implication rests with the idea that perhaps the specialists had more insight into the meaning of the items in the RS category.

5. The rotated factor matrix in this study identified 14 categories, of which 11 were named in characterizing a paraprofessional. These factors were:

General Personal Qualities
Adaptability
Job Dedication
General Educational Qualities
Work Effectiveness
Middle Level Educational Training [1]
Feelings of Security
Positive Work Attitude
Frustration Tolerance
Flexibility

6. The factor analysis produced a rotated factor matrix while suggesting a different arrangement of items into categories than the arrangement in the original MRSP.

[1] Educational level estimated, tenth grade to two years of post-high school training

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Table 24

SUMMARY OF CHILD CARE WORKER CHARACTERISTICS ON WHICH RESPONDENTS AGREED IN BOTH STUDIES

Characteristics 1971	Characteristics 1973
+ ** good moral character	+ ** good homemaker
+ ** well groomed	+ good moral character
+ ** exhibit self-confidence	+ outgoing personality
+ ** good physical health	+ ** mature person
+ ** outgoing personality	
+ ** pleasant speaking voice	+*** is over 35 years old
	+*** is female
+ ** resides in community in which he works	+*** is over 60 years old
+*** age 25-35	
+ ** has own children	+ ** needs to possess many non-specific personal characteristics
+ ** high school education	+ ** able to adapt
	+ ** has outside interests
communicates through reading and writing skills	
skill in arithmetic and counting	+ ** either male or female
	+ punctual
two-year college education	+ ** shows compassion
works best under supervision	
	+*** demonstrates communicative skills in reading and writing
is over 35 years old	+*** skill in arithmetic and counting
is over 60 years old	+ ** may be any age
dependable	dependable
has patience with children	

(continued next page)

Summary of Child Care Worker Characteristics on Which Respondents Agreed in Both Studies (continued)

Characteristics 1971	Characteristics 1973
	has patience with children
frustration undesirable	
demonstrations of frustration undesirable	between ages 25 and 35
	has 2-year college education
+ ** punctual	
+ ** positive work attitude	has sense of humor
+ ** common sense	has secure personal feelings
secure in personal feelings	positive work attitude
possesses personal warmth	possesses common sense
	shows adult hostility when necessary
	relieves professional of routine tasks

+ Characteristics with highest verifications in both studies

** Characteristics derived from both studies that qualify for research in measurement techniques

*** Characteristics not clearly derived from the studies

7. Multiple correlations of nine selected factors for three groups of subjects - directors, trained aides, and untrained aides - showed high relationships in all groups between PS category and the original PS category. A high relationship was observed between EBW and the original EBW in all groups. For the directors and trained aides, a high relationship existed between age and years of child care work. Among directors, high correlational relationships existed between PS and original EBW, between EBW and original PS, and between original PS and original EBW. Among the trained aides, high correlational relationship existed between the PS and EBW categories. The factors, college training, child care work experience, and the third category (RS) did not have high correlations for any group. There was great similarity between the groups on the factors selected for intercorrelations.

The data on child care worker characteristics, as revealed through the 1971 research and the replication study, completed in 1973, showed 20 characteristics which the author felt worthy of consideration in any future research designed to discover techniques for assessment of these characteristics. Table 24 provided a summary of those characteristics that the statistical analysis used in the research in 1971 and 1973, indicated as having value for further investigation. Those characteristics having highest statistical verifications are indicated, while there are items listed which did not receive a high statistical verification for strong future consideration. Items of doubtful verification are also included.

These 20 characteristics need to be brought to the attention of all persons interested in the selection of child care workers, in order that they may be considered as possible criteria for hiring in child care jobs.

00072

CHAPTER V

CONCLUSIONS

The problem in this research was to analyze characteristics of paraprofessional child care workers, as determined by ratings given on a scale of paraprofessional worker characteristics. This study was a replication of an earlier study by Mazyck (1971) which researched the same characteristics on a group of subjects from the Eastern United States. The current research used subjects from the Far Western United States. The scale used in this study was derived by Mazyck (1971) and composed of two categories of characteristics: Personal-Social, and Educational-Biographical-Working Relationships.

The differences observed between the current research and the 1971 study were few. A general conclusion was that the subjects from the Far West and the subjects from the East viewed characteristics desirable for child care paraprofessionals in a similar manner. Both groups placed the characteristics in the same categories with minor differences. In the third category (RS) there were six items in 1971 and 5 items in the current research. The EBW category contained 15 items in each study. PS contained 16 in the 1973 st and 15 in 1971. In each instance, over 90% of the items were cate gorized in the same manner.

The underlying factors around which the items clustered were similar in both studies. Some of the unnamed factors of 1971 were given names in 1973, but the new names were in the same general framework of names already used in 1971. The clusters of items were somewhat different in 1973.

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Findings show that from both studies there are 20 scale items that each of the groups agree on as being significant characteristics of paraprofessionals. The characteristics are: good moral character, outgoing personality, well-groomed, exhibits self-confidence, good physical health, pleasant speaking voice, resides in community in which he works, has own children, minimum of a high school education, punctual, positive work attitude, common sense, good homemaker, mature person, able to adapt, has outside interests, may be either male or female, shows compassion, may be any age, and needs to possess many non-specific personal characteristics.

The other major difference observed was that the untrained and the trained aides from the Far West appeared to have more post-high school education than those in the Eastern study.

Evidence thus far would indicate that the Mazyck Rating Scale for Paraprofessionals does include items which apparently have the ability to discriminate a desirable paraprofessional--that is, one who may function more like a professional than an untrained worker. The characteristics pointed out by the MRSP seem to have some universality about them, as indicated by groups of persons in quite separate areas of the United States.

These characteristics that have been identified in the MRSP need further research on ways and means of measuring the extent of the characteristic as it may be possessed by a potential paraprofessional child care worker.

This study completed the task it proposed--that is, to show that in a replication study of child care workers there would be no significant difference in the manner in which groups of child care workers view the characteristics of child care professional workers, as found in the MRSP.

Indications for next steps to this (1973) research are similar to those proposed by Mazyck (1971) --that is, to design ways and means for measuring the now identified characteristics. The purpose for this measurement is to develop an instrument, or several instruments, that may be used by employers of child care paraprofessionals when they are faced with attempting to select desirable child care paraprofessionals to care for the nation's young children.

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APPENDIX A

The Mazyck Rating Scale for Paraprofessionals

THE MAZYCK RATING SCALE FOR PARAPROFESSIONALS

The objective of this scale is to rate characteristics of paraprofessionals which are considered desirable in the selection of child care workers. Each statement includes a characteristic about which you are asked to express some level of attitude.

DIRECTIONS

Read each statement carefully and mark X in the parenthesis under the column heading that indicates how you feel about each item. Whenever possible, let your own personal experience determine your answer.

Do not spend much time on any item. If in doubt, mark X in the parenthesis under the column which seems most nearly to express your present feelings about the statement.

BE SURE TO ANSWER EVERY ITEM.

(A paraprofessional is a subprofessional, a nonprofessional, an assistant, an attendant, or an aide.)

DIRECTIONS:

Mark an X in the parenthesis under the column heading that indicates how you feel about each of the following items.

In your opinion, a good paraprofessional:	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1. finds frustration undesirable.	( )	( )	( )	( )	( )
2. has a sense of humor at all times.	( )	( )	( )	( )	( )
3. is dependable if he plans to progress in his work.	( )	( )	( )	( )	( )
4. needs patience in work with children.	( )	( )	( )	( )	( )
5. has difficulty in carrying out continuous displays of enthusiasm.	( )	( )	( )	( )	( )
6. demonstrates his communicative skills through his abilities in reading and writing.	( )	( )	( )	( )	( )
7. resides in the community in which he works.	( )	( )	( )	( )	( )
8. is between the ages of 25 and 35.	( )	( )	( )	( )	( )
9. has ability to work with others.	( )	( )	( )	( )	( )
10. shows adult hostility when it is necessary.	( )	( )	( )	( )	( )
11. loves children.	( )	( )	( )	( )	( )
12. has a skill in arithmetic and counting.	( )	( )	( )	( )	( )

DIRECTIONS:

Mark an X in the parenthesis under the column heading that indicates how you feel about each of the following items:

In your opinion, a good paraprofessional:	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
13. has a two-year college education.	( )	( )	( )	( )	( )
14. has secure personal feelings.	( )	( )	( )	( )	( )
15. possesses personal warmth.	( )	( )	( )	( )	( )
16. demonstrates his responsiveness through his ability to stimulate a group.	( )	( )	( )	( )	( )
17. is a good homemaker.	( )	( )	( )	( )	( )
18. is only cooperative in his work with others who are professionals.	( )	( )	( )	( )	( )
19. has good moral character.	( )	( )	( )	( )	( )
20. is over 35 years old.	( )	( )	( )	( )	( )
21. is well groomed.	( )	( )	( )	( )	( )
22. may be any age.	( )	( )	( )	( )	( )
23. is a female.	( )	( )	( )	( )	( )
24. is 60 years old or over.	( )	( )	( )	( )	( )
25. must exhibit self-confidence.	( )	( )	( )	( )	( )
27. is able to adapt to all situations.	( )	( )	( )	( )	( )
28. feels the idea of having sincere interest in children is over-emphasized.	( )	( )	( )	( )	( )

00087

DIRECTIONS:

Mark an X in the parenthesis under the column heading that indicates how you feel about each of the following items.

In your opinion, a good paraprofessional:	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
29. has children of his own.	( )	( )	( )	( )	( )
30. has a high school education.	( )	( )	( )	( )	( )
31. could be either male or female.	( )	( )	( )	( )	( )
32. is punctual in going to a task when he is supposed to.	( )	( )	( )	( )	( )
33. has good physical health.	( )	( )	( )	( )	( )
34. works best under the supervision of professional child care specialists.	( )	( )	( )	( )	( )
35. has an outgoing personality.	( )	( )	( )	( )	( )
36. is a mature person.	( )	( )	( )	( )	( )
37. gains specific knowledge about children through formal education.	( )	( )	( )	( )	( )
38. exhibits a pleasant speaking voice.	( )	( )	( )	( )	( )
39. finds demonstration of outward reactions to stress in child care situations undesirable.	( )	( )	( )	( )	( )
40. shows compassion in his interpersonal relations at all levels.	( )	( )	( )	( )	( )
41. has outside interests.	( )	( )	( )	( )	( )
42. relieves the professional child care specialists of the routine tasks.	( )	( )	( )	( )	( )

00988

DIRECTIONS:

Mark an X in the parenthesis under the column heading that indicates how you feel about each of the following items:

In your opinion a good paraprofessional:	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
43. has an eighth grade education.	( )	( )	( )	( )	( )
44. has a positive attitude toward work.	( )	( )	( )	( )	( )
45. has good working relations in all child care situations.	( )	( )	( )	( )	( )
46. possesses common sense.	( )	( )	( )	( )	( )

69089

APPENDIX B

Director's Personal Data

Paraprofessional's Personal Data

DIRECTOR'S PERSONAL DATA

Please give a few facts about yourself by either checking or writing in the requested information.

1. Sex: female____; male____. 2. Birth date_____.

3. Marital status: single____; married____; divorced____; separated____; widowed____.

4. Do you have children? Yes____; No____; Number of boys____; Number of girls____; Number of children under six____.

5. Director's age range: 16-20____; 21-25____; 26-30____; 31-35____; 36-40____; 41-45____; 46-50____; over 60.

6. Number of years of elementary school completed_____.

7. Number of years of high school completed_____.

8. Number of years of college completed____; Graduate: Yes____; No____.

9. Area of college training_____

10. Technical and/or vocational training, type or kind (name)_____; Number of years____.

11. Area of educational specialization; (check what applies) Child Development___; Early Childhood Education___; Home Economics___; Elementary Education___; Secondary Education___; Psychology___; Sociology___; other (name field)_____.

12. Degree(s) held: B.S.____; M.S.____; Ph.D.____; other_____.

13. Length of time in child care work: Years____; Months____.

14. Number of months in present job____; or years____.

15. Experience as child care center director (months)____; or (years)____.

16. How many paraprofessionals do you supervise_____.

17. What is the total capacity of your center(s)_____.

18. What is the age range of the children you supervise_____.

19. Where did you receive your Head Start training?_____
Name of

00091

_____
Organization City State

PARAPROFESSIONAL'S PERSONAL DATA

Please give a few facts about yourself by either checking or writing in the requested information.

1. Sex: (Check One) female____male____. 2. Birth date_____.

3. Marital status: (Check One) single____; married____; divorced____; separated____; widowed____.

4. Do you have children? (Check One) Yes____; No____; Number of boys____; Number of girls____; Number of children under six____.

5. Paraprofessional's range (Check One) 16-20____; 21-25____; 26-30____; 31-35____; 36-40____; 41-45____; 46-50____; over 60____.

EDUCATION

6. Number of years of elementary school completed_____.

7. Number of years of high school completed____. Graduated: Yes____; No____; Date of graduation (year)_____.

8. Number of years of college completed____; Graduated: Yes____; No____.

9. Area of college training:_____.

10. Technical and/or vocational training, type or kind (name)_____; Number of years____.

EMPLOYMENT

11. Number of years of child care work____; or number of months in child care work____.

12. Number of months in present job____; or number of years____.

13. Previous kind of paid work experiences_____.

_____

14. Plan to continue in child care work: Yes____; No____.

15. Where did you receive your Head Start training?_____
Name of

_____
Organization City State

16. If you have had no training, make a check here____.

APPENDIX C

Letters to Center Directors

00093

TELEPHONE 379-7500
EXT. 284 OR
273-1815
AREA CODE (919)

NORTH CAROLINA AGRICULTURAL AND TECHNICAL
STATE UNIVERSITY
GREENSBORO 27411

MANPOWER RESEARCH CENTER

RESEARCH AND TRAINING PROGRAMS

October 5, 1972

We are preparing to research the subject of personal characteristics of paraprofessionals. We have previously researched this question in 1971 with Head Start personnel from the Mid-Atlantic Region of the United States. Now we are concerned with trying to learn how directors, trained paraprofessionals, and untrained paraprofessionals from the western United States rate a list of characteristics that paraprofessionals ought to possess.

We would very much like to have your cooperation in this project which is being conducted at North Carolina Agricultural and Technical State University, Greensboro, North Carolina, under the sponsorship of the Regional Manpower Research Training Center. Mrs. Mary Lewis, Child Development Specialist of Region IX, Office of Child Development, DHEW, San Francisco, has suggested that you would be most cooperative in helping us obtain the data we need.

We would like to be able to send you a packet of materials which would include a rating scale and questionnaire for a trained aide, an untrained aide, and for yourself, the director. You and your personnel will be asked to complete these materials and return them by an appointed date, November 1, 1972.

We are enclosing a self-addressed postal card for you to return to us letting us know that you and your personnel will participate in our project. We will appreciate your help for we believe our findings will be of benefit to all who work with paraprofessionals. We will be happy to send you a report of our findings after we have completed the research.

Our data-gathering forms will be forwarded under separate cover and instructions will be included in order that they may be properly used.

We will be pleased to have a positive reply from you in regard to assisting with this research project. Your help will be immensely appreciated.

Sincerely,

Harold E. Mazyck, Jr.
Chairman, Department
of Home Economics
Project Director

HEM/pt

Enclosure

TELEPHONE 379-7500
EXT. 284 OR
273-1815
AREA CODE (919)

NORTH CAROLINA AGRICULTURAL AND TECHNICAL
STATE UNIVERSITY
GREENSBORO 27411

MANPOWER RESEARCH CENTER

RESEARCH AND TRAINING PROGRAMS

October 14, 1972

Considerable interest has developed in all areas of child care research and at this time we are about to engage in research on the characteristics of child care paraprofessionals. The research that we are concerned with at this time is the second part of a research project which involved Head Start personnel. The first segment of the research was completed in 1971 with the assistance of Head Start personnel in the area that was then considered as the Head Start Mid-Atlantic Region. This time we are interested in doing the same type of research but with Head Start personnel from the far western states. The prime purpose in this research is to see how two groups of Head Start aides and their directors rate a group of characteristics that may be considered important when selecting paraprofessional (aides) child care workers. Information received from this study will be compared with data from the Middle Atlantic study in order to note similarities and differences.

Enclosed are three copies of a rating scale on characteristics that may be used in the selection of child care workers and an attached personal data sheet. They are to be used as follows:

09886

1. The yellow copy to be completed by the Head Start Director.

2. The blue copy to be completed by an aide in your program who received her training at the Leadership Development Training Center for Region IX. If you do not have an aide who received training at the Region IX Training Center, write NOT AVAILABLE on the blue rating scale and return it in the attached envelope.

3. The pink copy is for another aide in your program who has not received any formal training, except the usual in service training carried out in the local program.

As director, we would appreciate it if you would permit the aides you select, using the above criteria, to spend 30 minutes of their time completing the rating scale and the attached personal data sheet. We would also appreciate it if you would see to it that the aides fill out the rating scales individually and without help. In addition, we would be pleased to have you spend 30 minutes of your time to fill out the yellow rating scale and the attached personal data sheet.

In order that we may carry out this important part of the research, we have set a deadline of November 1, 1972 for all scales to be returned. Please see that your aides involved in this research observe this date. Each scale is to be returned in its own self-addressed, stamped envelope, which is attached.

We would like you to know that Mrs. Mary Lewis, Child Development specialist, Region IX, San Francisco, Office of Child Development, DHEW, and the Regional Head Start Office are deeply concerned with this research project and its outcome. Mrs. Lewis feels that the project will offer some important information to all who work in Head Start, especially directors and training specialists.

Thank you for helping us in this research project. We appreciate your time and look forward to receiving the rating scale by November 1, 1972.

Sincerely yours,

Harold E. Mazyck, Jr., Chairman
Department of Home Economics
Project Director

HEM/pt

Enclosures

APPENDIX D

Follow-up Letter

00699

TELEPHONE 379-7500
EXT. 284 OR
273-1815
AREA CODE (919)

NORTH CAROLINA AGRICULTURAL AND TECHNICAL
STATE UNIVERSITY
GREENSBORO 27411

MANPOWER RESEARCH CENTER

RESEARCH AND TRAINING PROGRAMS

November 22, 1972

Dear Research Participant:

We have not heard from you! We want to know how you feel about the characteristics of paraprofessionals by researching your expressions on the Mazyck Rating Scale for Paraprofessionals.

On October 14, 1972, you were sent a Mazyck Rating Scale for Paraprofessionals from this University by me, with the approval of Mary Lewis of the San Francisco OCD Office. We are interested in your returning the scale and/or having the aides you selected to return their scales. We are in urgent need of the information to continue our research. We are sure that the findings will be beneficial to all who engage in the care of children. Many people at the regional and national levels are looking forward to the completion of this project. We would appreciate the immediate return of the Rating Scales by December 8, 1972.

If you and the aides you selected to participate in the research have returned the Rating Scales, we are very appreciative. Your return and this letter may have crossed in the mail. For this we are sorry; please accept our apology.

We have not received the following:

_____ Scale and Personal Data from Director

_____ Scale and Personal Data from Trained Aide

_____ Scale and Personal Data from Untrained Aide

We thank you for your cooperation, and will earnestly hurry to get the findings before the public.

Sincerely,

Harold E. Mazyck, Jr., Chairman
Department of Home Economics

Enclosures

APPENDIX E

List of Child Development Specialists

Used by Mazyck

LIST OF CHILD DEVELOPMENT SPECIALISTS

USED BY MAZYCK

Dr. Milton Akers
Executive Director
National Association for Education of Young Children
1834 Connecticut Avenue, N. W.
Washington, D. C. 20009

Dr. Millie Almy, Professor
Department of Early Childhood Education
Box 9, Teachers College
Columbia University
New York, New York 10007

Mrs. Stevanne Auerbach
Professional Assistant
Office of the Special Assistant for Urban Education
Office of the Commissioner of Education
Department of Health, Education, and Welfare
Washington, D. C.

Dr. Alfred A. Baumeister
Center for Developmental and Learning Disorders
University of Alabama
University, Alabama

Dr. Bruno Bettelheim
University of Chicago
Chicago, Illinois

Dr. Donald Baer, Associate Professor
Department of Human Development
University of Kansas
Lawrence, Kansas 66045

Dr. Clara Baldwin
Center for Research in Education
Cornell University
Ithaca, New York 14850

Dr. Nancy Bayley
252 Alvarado Road
Berkeley, California

Dr. Silvia M. Bell
Department of Psychology
Johns Hopkins University
Baltimore, Maryland 21218

09102

Dr. Urie Bronfenbrenner
Professor of Psychology and Human Development
Cornell University
Ithaca, New York 14805

Dr. Jerome Bruner
Professor of Psychology
Center for Cognitive Studies
Harvard University
Cambridge, Massachusetts

Dr. James Bryan
Department of Psychology
Northwestern University
Evanston, Illinois 60201

Dr. Bettye Caldwell, Director
Center for Early Development and Education
Little Rock, Arkansas

Dr. Joseph Church
Department of Psychology
Brooklyn College
Brooklyn, New York 11210

Dr. Kenneth B. Clark
Metropolitan Applied Research Center, Inc.
60 E. 86th Street
New York, New York

Dr. C. Keith Conners
Child Development Laboratory
Massachusetts General Hospital
Boston, Massachusetts 02114

Miss Margaret L. Cooper
The Edna A. Hill Child Development Center
Department of Human Development
The University of Kansas
Lawrence, Kansas 06044

Miss Lela B. Costin
Department of Social Work
University of Illinois
Urban, Illinois 61801

Dr. Samuel H. Cox
Department of Psychology
North Texas State University
Denton, Texas 76203

9103

Mrs. Virginia C. Crandall
Senior Investigator
Fels Research Institute for the Study of Human Development
Yellow Springs, Ohio

Dr. Therry Deal
School of Home Economics
University of Georgia
Athens, Georgia

Dr. Martin Deutsch, Director
Institute for Developmental Studies
New York University
Washington Square
New York, New York

Dr. Donald J. Dickerson
Department of Psychology
University of Connecticut
Storrs, Connecticut 06268

Dr. Laura L. Dittmann
National Association for Education of Young Children
1834 Connecticut Avenue, N.W.
Washington, D. C. 20009

Mrs. Belle Dubnoff, Director
Dubnoff School for Educational Therapy
North Hollywood, California

Dr. David Elkin
Department of Psychology
University of Rochester
Rochester, New York 14627

Dr. Richard C. Endsley
Assistant Professor
Departments of Child Development and Psychology
University of Georgia
Athens, Georgia 30601

Dr. Siegfried Engelmann
University of Oregon
Eugene, Oregon

Dr. Jacob R. Fishman
Professor of Psychiatry, School of Medicine
Howard University
Washington, D. C.

Dr. John H. Flavell, Professor
Institute of Child Development
University of Minnesota
Minneapolis, Minnesota

Dr. Edmund Gordon
Professor of Psychology and Education
Ferkauf Graduate School of Humanities and Social Sciences
Yeshiva University
New York, New York 10033

Dr. Ira Gordon
Institute of Human Resources
University of Florida
Gainesville, Florida

Dr. Susan Gray, Director
Demonstration and Research Center on Early Childhood Education
George Peabody College
Nashville, Tennessee 37203

Mrs. Marjorie Grossett, Director
Day Care Council of New York, Inc.
114 East 32nd Street
New York, New York

Dr. Florance R. Harris
Lecturer and Director
Developmental Psychology Laboratory Preschool
University of Washington
Seattle, Washington 98105

Dr. Willard W. Hartup, Professor
Associate Director
Institute of Child Development
University of Minnesota
Minneapolis, Minnesota

Dr. Robert D. Hess, Professor
School of Education
Stanford University
Stanford, California 94301

Dr. Walter L. Hodges, Associate Professor
Director of Institute for Child Study
Indiana University
Indianapolis, Indiana

Dr. Frances D. Horowitz
Associate Professor
Department of Human Development & Psychology
University of Kansas
Lawrence, Kansas

Dr. Arthur R. Jensen
Professor of Educational Psychology
Institute for Human Learning
University of California
Berkeley, California

Dr. Jerome Kagan
Department of Developmental Psychology
William James Hall
Harvard University
Cambridge, Massachusetts 02138

Dr. Irwin Katz, Professor
Psychology Department
University of Michigan
Ann Arbor, Michigan

Dr. Mary Elizabeth Keister
Institute for Child & Family Development
University of North Carolina at Greensboro
Greensboro, North Carolina 27412

Dr. Jennie Klein
Educational Specialist
Office of Child Development
Department of Health, Education, & Welfare
300 "C" Street, N. W.
Washington, D. C.

Dr. Irving Lazar, Director
Child Development Programs
Appalachian Regional Commission
1666 Connecticut Avenue
Washington, D. C. 20235

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Fels Research Institute
Yellow Springs, Ohio 45387

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Atlanta, Georgia

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Stanford University
Stanford, California 94305

Dr. James O. Miller, Director
National Laboratory of Early Childhood Education
University of Illinois
Urbana-Champaign
Urbana, Illinois

Dr. Shirley G. Moore
Professor and Coordinator of Preschool Programs
Institute of Child Development
University of Minnesota
Minneapolis, Minnesota

Dr. Howard A. Moss
Child Research Branch
National Institute of Mental Health
Bethesda, Maryland 20014

Dr. Sidney J. Parnes
State University College
State University of New York at Buffalo
Buffalo, New York

Dr. Hayne W. Reese
Department of Human Development
University of Kansas
Lawrence, Kansas 66044

Dr. Frank Riessman, Director
New Careers Development Center
New York University
Washington Square
New York, New York

Miss Mary Robinson
Division of Research & Development
Office of Economic Opportunity
Washington, D. C.

Dr. Wade Robinson, Director
Central Mid-Western Regional Educational Laboratory
St. Ann, Missouri

Dr. William Rohwer, Jr.
Department of Education
University of California
Berkeley, California 94704

00107

Dr. Robert R. Sears
Department of Psychology
Stanford University
Stanford, California 94305

Dr. Irving E. Sigel, Chairman of Research
The Merrill-Palmer Institute
71 E. Perry Street
Detroit, Michigan 48202

Dr. Joseph J. Sparling, Associate Director
Education Program
Frank Porter Graham Child Development Center
University of North Carolina at Chapel Hill
Chapel Hill, North Carolina

Dr. Harold W. Stevenson, Professor
Director of Institute of Child Development
University of Minnesota
Minneapolis, Minnesota 55414

Dr. Jeannette Galambos Stone
Department of Psychology
Vassar College
Poughkeepsie, New York 12601

Dr. Mildred C. Templin, Professor
Institute of Child Development
University of Minnesota
Minneapolis, Minnesota

Dr. Roger Ulrich, Head
Department of Psychology
Western Michigan University
Kalamazoo, Michigan 49001

Dr. Doxey A. Wilkerson, Associate Professor of Education
Ferkauf Graduate School of Humanities & Social Sciences
Yeshiva University
New York, New York 10033

Dr. Montrose M. Wolf, Associate Professor
Department of Human Development
University of Kansas
Lawrence, Kansas

Dr. Leon Yarrow
National Institute Child Health & Human Development
7401 Nevis Road
Bethesda, Maryland 20034